
**Report of the
Electro-Convulsive Therapy
Review Committee**

December 1985

ELECTRO-CONVULSIVE THERAPY REVIEW COMMITTEE

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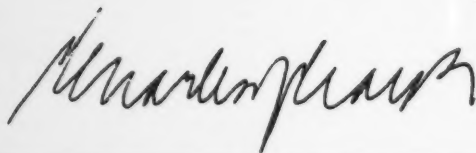
December 16, 1985

The Honourable Murray J. Elston
Minister of Health
10th Floor, Hepburn Block
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Dear Mr. Minister:

Pursuant to Section 9 of the Ministry of Health Act, I am
pleased to submit the Report on the use of Electro-Convulsive
Therapy in Ontario.

All of which is respectfully submitted.



Charles J. Clark, Q.C.
Chairman
Electro-Convulsive Therapy
Review Committee

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Charles J. Clark, Q.C.
Chairman

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ELECTRO-CONVULSIVE THERAPY REVIEW COMMITTEE

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Preface

Although electro-convulsive therapy (ECT) has been used in the field of psychiatry for over 45 years, it remains the focus of controversy with respect to its effectiveness, side effects and indications for its use. Its mechanism of action is unknown. There is great concern about past, present and possible future misuse and abuse of ECT, and growing concern in general about psychiatric patients' rights, including the right to autonomy. These concerns are countered by concern for the well-being and appropriate treatment of psychiatric patients, whose very illness may deprive them of the ability to exercise the right to autonomy; and the further concern of denying someone a right to a potentially effective treatment.

In December of 1983, an application for judicial review of a decision of a Board of Review appointed under the Ontario Mental Health Act¹ was brought before Madam Justice Van Camp of the High Court of Ontario on behalf of Mrs. T.² The written reasons for judgement are attached as Schedule "A".

Mrs. T was an involuntary patient in a psychiatric hospital and was considered competent to consent to or refuse treatment. She, and her brother, father and husband on her behalf, all refused to consent to treatment with ECT. The attending physician applied to the Board of Review for a treatment order, pursuant to section 35(4) of the Mental Health Act, to authorize the administration of ECT.

The Review Board unanimously authorized a course of not more than 15 ECT treatments following neurological examination of Mrs. T by a physician. The order was to expire six months from its date. Such authorization was only valid as long as the patient remained an involuntary patient.

The question before the court was very narrow and specific, namely, whether ECT falls within the definition of psychosurgery as set out in section 35(1) of the

Mental Health Act. If the court answered this question in the affirmative, the Board of Review would be prevented from authorizing ECT by virtue of section 35(5), which prohibits the Board from authorizing psychosurgery.

In reaching her decision, after hearing evidence of several expert witnesses (three of whom were psychiatrists, two of whom were neurologists, one a neurosurgeon and one a biomedical and electrical engineer, Madam Justice Van Camp stated:

Of the different experts who gave their opinions, I preferred the report of Dr. (Henry) Berry (a Toronto neurologist). It seemed to me that he was more impartial, that he was not espousing one position or the other, that he had, from his own personal experience and from his studies, endeavoured with an open mind to find the answer to this question. After a consideration of the other opinions, and his opinion tested by cross-examination, I accept his opinion that "apart from the isolated occurrence of extremely rare complications, properly administered electro-convulsive therapy does not have any permanent effect on nerve cell bodies, conducting tracts or the continuity of normal brain tissue" in so far as present medical research can disclose it.³

Madam Justice Van Camp found on the evidence that ECT does not fall within the definition of psychosurgery as set out in the Mental Health Act,⁴ and that the Review Board had jurisdiction to authorize the treatments.

In the course of reaching her decision, Madam Justice Van Camp noted that:

...(S)tudy is needed of the effect of the administering of ECT in Ontario under its present form. What has been put before me is either speculation or possibilities. The wide-ranging investigation that has been done of the research, reports and editorial comment over the years in other countries by those who have done original research and others does not, either in any one respect or cumulatively, provide proof that ECT destroys or interrupts the continuity of normal brain tissue. It is not sufficient to say that each of animal research, human autopsy studies, EEG, the study of electric current, leaves unanswered some questions. A collection of uncertain possibilities does not lead to a positive conclusion.

The research cited is of methods which have changed. It leaves unanswered questions which are necessary to an analysis of it.⁵

Press reports of this case, and the efforts of a group of former patients, professionals and supporters called the Ontario Coalition to Stop Electro Shock brought the controversy surrounding ECT to the public's attention, in particular,

on the issues of whether a patient should receive any treatment against his or her will, and whether or not ECT should be available in the province in any circumstances.

On February 14, 1984, the then Minister of Health, the Honourable Keith Norton, appointed Windsor lawyer Charles J. Clark, Q.C., to head an interdisciplinary review of electro-convulsive therapy in Ontario pursuant to section 9 of the Ministry of Health Act.⁶ This section is set out hereunder:

The Lieutenant Governor in Council or the Minister may appoint committees to perform such advisory functions as are considered necessary or desirable in order to assist the Minister in the discharge of his duties.

On July 19, 1984, the Minister appointed 14 members to the Electro-Convulsive Therapy Review Committee. A few weeks later, a fifteenth member was appointed.

The terms of reference were settled by the Committee in co-operation with the Ministry of Health. They are set out hereunder:

To examine and analyse the use of ECT in the province (past and present) including but not limited to:

- . Number of patients receiving ECT as a function of status, age, sex, diagnosis, source of consent
- . Follow-up of patients receiving ECT
- . Number of treatments per patient per admission
- . Written procedures outlining criteria and standards

To examine the medical, legal, and ethical issues surrounding the use of ECT.

To recommend, based on available research and expert knowledge, guidelines for the future use of ECT in Ontario including when, how, why, and if such treatment should be ordered.

To recommend directions for future research and study.

You will note the broad terms of reference. In addition to the specific matters referred to, the terms of reference encompass all issues related to the use of ECT in Ontario.

The terms of reference directed the Committee to examine the past and present use of ECT and to make recommendations for the future use of ECT. The Committee looked at the past in order to put present practices into perspective and to provide the necessary background for considering the present and the future.

The Committee held its first meeting on July 25, 1984. The entire Committee met for 24 full day meetings. In light of the broad terms of reference and the vast amount of material it had to review, the Committee struck the following Subcommittees, each of which met independently of the full Committee on several occasions and made presentations to the full Committee:

- Subcommittee on Administration
- Subcommittee on Questionnaires
- Subcommittee on Public Perspective
- Subcommittee on Risks, Benefits and Alternative Treatments
- Subcommittee on Legal Issues and the Charter of Rights
- Subcommittee on Moral and Ethical Issues
- Subcommittee on Procedural Aspects of ECT
- Subcommittee on the Effect of ECT on Brain Structure and Function.

The Committee reviewed published and unpublished legal, ethical and scientific literature on ECT and related issues, and relevant Canadian, American and British legislation, as well as pertinent case law from those jurisdictions.

In addition, the Committee communicated with numerous experts to solicit up-to-date information on ECT. All provincial Ministries of Health in Canada and Colleges of Physicians and Surgeons in Canada were contacted for information, as were the Regional Review Boards of Ontario and the Chief Coroner's Office of Ontario.

The Committee requested information regarding policies and procedures for ECT, as well as specific data on the use of ECT, from 86 general hospitals and psychiatric hospitals in the province. Of these, 45 responded to the questionnaire

on policies and procedures, 35 provided data on ECT use, and 7 advised that ECT is not administered in their facility. Copies of the two questionnaires are appended as Schedule "B" to this Report. The distribution of the questionnaires is outlined in Schedule "C".

The Committee sent representatives to two conferences on ECT: the International Conference on ECT which took place in New York in January 1985; and the National Institutes of Health Consensus Development Conference on ECT in Bethesda, Maryland, in June 1985.

In addition, the Committee reviewed position papers of several associations, including the Report of the Task Force on Electro-convulsive Therapy of the American Psychiatric Association,⁷ and the British Task Force Report on ECT.⁸ The Committee read issues of Phoenix Rising, a quarterly magazine published by On Our Own (an organization of former psychiatric patients), as well as transcripts from hearings held by the Ontario Coalition to Stop Electro Shock.

The Committee placed notices in both French and English newspapers throughout the province requesting submissions. A copy of the notices is attached as Schedule "D" to this Report. Over 350 submissions were received, of which over 250 were from the lay public. The remainder were from various institutions, organizations and professional associations, a list of which may be found in Schedule "E" of the Report. The individual lay submitters were sent a questionnaire to elicit information on their personal (or a family member's) experience with the treatment. A copy of the questionnaire appears as Schedule "F".

A substantial majority of the Committee determined at an early stage in its deliberations that the delicacy of the subject matter, the need for confidentiality, the size of the Committee, and the Committee's lack of power to compel witnesses to testify under oath or to cross-examine witnesses were all factors indicating the need for written submissions as opposed to public hearings. However, recognizing that this might place a burden on some individuals, it was decided that any individual who wished to make a submission but was unable to do so in writing, would be invited to speak with a member of the Committee or the staff, who would transcribe the submission and refer it to the full Committee. Several individuals used this process to put their views before the Committee. There was a divergence of opinion on the matter of public hearings. Three members of the Committee were in favour of public hearings as they felt the

issues to be of interest to the public. One of these members held the view that all meetings of the Committee should be open to the public.

It is not intended in this Report to set out in detail all the material amassed by the Committee in what it considers to have been a thorough and penetrating review. The Committee has endeavoured to give careful consideration to everything put before it. For the purpose of the Report itself, however, reference has been made to what the Committee believes to be the most relevant information in forming the basis of its conclusions and recommendations.

A glossary of medical terms is provided for reference at the end of this Report.

The Committee would like to thank all those members of the public who took the time and had the courage to share their feelings on this sensitive subject, all the hospitals who supplied information in spite of the great amount of time and effort that it took for them to do so, and the various individuals and associations who responded to requests so promptly. The Committee asked a great deal and was seldom disappointed.

The Committee would also like to acknowledge the assistance given to it by the staff. It was a very small staff and, as a result, heavy responsibilities were placed on each person.

The Committee was most fortunate to obtain the services of Ms. Cynthia Ledgley, a law student with a background in the health sciences, as its research assistant. She spent many long hours in the libraries at the University of Toronto and York University, seeking out material on ECT, reviewing legislation and case law and providing summaries and updates for the Committee.

During various stages of the review, the Committee was assisted by its secretaries, Ms. Huguette Dubé, Mrs. Lesley Cornelius and Ms. Karen Pasea. They typed numerous drafts, photocopied endlessly, and did everything asked of them without complaint.

The Committee would also like to acknowledge the assistance given to it by Mr. Jim Dunkin. Mr. Dunkin prepared the data received and collected by the Committee for computer analysis, as well as assisting with the analysis itself.

The Committee would also like to thank the staff of the Mental Health Area of the Ministry of Health for their co-operation and assistance.

Mrs. Felice M.R. Guberman served as legal counsel to the Committee. She brought to the task her knowledge of the law, particularly in the field of medical jurisprudence and, as well, her recent experience as legal counsel to the Hospital for Sick Children Review Committee. The participation of Mrs. Guberman went beyond advising the Committee on legal issues. She undertook the responsibility for the administrative direction of the entire work of the Committee. Her entire effort is worthy of commendation.

A Brief History of Electro-Convulsive Therapy

Electro-convulsive therapy is a medical procedure for the treatment of certain mental disorders in which a series of generalized or grand mal convulsions are induced by electrical stimulation of the brain. ECT is the oldest surviving biological treatment in clinical psychiatry. It is, however, one of the most controversial medical treatments in current use.¹

In the early 1930s, prior to the development of electrically induced seizures, Ladislaus von Meduna developed a convulsive treatment using camphor in oil to chemically induce convulsion in guinea pigs. Meduna's work was based on the hypothesis that epilepsy had a mitigating effect upon schizophrenia and rarely, if ever, were the two seen simultaneously in the same patient. This hypothesis has since been proved untrue. In 1934, Meduna used the methodology which he had devised to treat a human patient with apparent success. As camphor was difficult to work with, alternative inducing agents were devised such as pentylenetetrazol.²

Independent of this work, Manfred Sakel in 1933 reported the beneficial effect of insulin induced coma in the treatment of schizophrenia.

The electrical induction of seizures for the treatment of a mental disorder was first reported by Ugo Cerletti and Lucino Bini in 1938. The use of electricity to induce seizures, as developed by Cerletti and Bini, was a technical improvement over the induction of convulsions with pharmacologic agents, which had proven to be unreliable and less safe. While researching the induction of seizures in dogs by electrical means, Cerletti realized that death was caused by current travelling through the heart and changed the placement of the electrodes to the temples. After two years of conducting experimental neuropathological studies to try to exclude the possibility of brain damage attributable to ECT, he considered it safe to proceed with the first application of ECT to human beings.³

At about the same time, in 1935, Egas Moniz performed the first frontal lobotomy (a form of psychosurgery) on a patient with schizophrenia.

Thus, by 1940, there were three somatic treatments for the management of most severe mental disorders: convulsive therapy, insulin coma and psychosurgery. These treatments and reports of their success were greeted enthusiastically by many psychiatrists, as at that time there were no effective alternatives. In retrospect, the treatments were sometimes used indiscriminately. In time, induction of a convulsion by drugs was recognized as being less reliable than induction by electricity. By 1960, ECT was the only convulsive therapy to continue to be in use.

For lack of effective alternatives, ECT was used to treat a wide variety of physical and mental disorders, without adequately controlled clinical trials to assess its safety and effectiveness.

The early technical administration of ECT was very crude and resulted in significant side effects of the convulsion such as long bone and spinal fractures. In an attempt to reduce the severity of these side effects, physical restraints were used. Later, these physical restraints were replaced by anaesthesia and muscle relaxants.

"Modified ECT" is the administration of ECT in conjunction with anaesthetic drugs and muscle relaxants, so that the involuntary body movements associated with seizures are reduced in intensity by temporary muscle paralysis. This diminishes the risk of musculo-skeletal injuries. Hyperoxygenation compensates for the brain's increased need for oxygen.⁴

With no alternative forms of therapy available, ECT continued in popularity until the introduction of psychotropic drugs such as the neuroleptics and, subsequently, antidepressants. As new drugs for treating psychiatric disorders became available, these often replaced ECT treatments.

However, not all patients are responsive to or able to tolerate these medications. As well, for many physicians ECT has remained the treatment of choice for certain specific disorders, and the next treatment of choice for some patients who do not respond to drugs.

There has been ongoing methodological refinement in the use of ECT, as well as a narrowing of the indications for its use. However, ECT continues to be the centre of controversy and its use is the subject of a divergence of opinion in both the public and professional sectors. Some of the controversy is related to the following:

- . The historical view of people with psychiatric disorders and mental illness.
- . Outdated modes of practice.
- . Clinical indications for ECT.
- . Method of application and side effects of ECT.
- . The legal and ethical implications of administering ECT to incompetent and/or involuntary patients.
- . Adequacy of consent or proxy consent to treatment.

The Committee will examine these issues in detail in the Report's subsequent chapters.

CHRONOLOGY

- 1933 Sakel reports favourable results with the use of insulin shock in the treatment of schizophrenia.
- 1934 Meduna induces the first convulsion in a patient by intramuscular injection of 25 per cent camphor in olive oil.
- 1935 Moniz performs the first frontal lobotomy on a patient with schizophrenia.
- 1938 Ugo Cerletti, in Rome, Italy, administers the first electro-convulsive treatment with the assistance of Lucino Bini.
- 1941 Bennet first reports the use of neuromuscular blocker (curare), later replaced by succinylcholine, in the administration of ECT.

1950s Modern psychopharmaceutical era begins and specific drug treatments for severe mental disorders are introduced.

Introduction of psychotropic medication including neuroleptics and antidepressants.

Barbiturates and associated ventilation are used to modify side effects of ECT (known as modified ECT).

Anaesthetists are commonly in attendance to ensure adequate anaesthesia and resuscitation during the administration of ECT.

1970s Ex psychiatric patient groups begin to organize and protest the use of ECT.

1973 Publication of the Massachusetts Task Force Report on ECT.

1977 Publication of the position paper on ECT of the Royal College of Psychiatrists in Great Britain.⁵

1978 The American Psychiatric Association publishes its Task Force Report on ECT.⁶

1980 The Canadian Psychiatric Association releases its position paper on ECT.

1982 Citizens of Berkeley, California, vote in a referendum to ban the use of ECT in their city.

1983 The Northern California Psychiatric Society, along with other associations, begins a suit against the City of Berkeley to have the ban overturned. Judge Donald McCullum issues a temporary injunction preventing enforcement of the Berkeley ban on ECT.

In Ontario, Madam Justice Van Camp rules that ECT is not a form of psychosurgery as defined in the Ontario Mental Health Act and that, therefore, a Regional Review Board has jurisdiction to order the treatment in the absence of patient consent or proxy consent.⁷

- 1984 The Minister of Health for Ontario appoints Mr. Charles J. Clark, Q.C., chairman of a 16-member committee to review the use of ECT in Ontario.

The local Board of Health in Toronto adopts a formal motion calling for an "immediate moratorium on the use of ECT in Ontario without informed consent" pending further study and public hearings.

The first International Conference on ECT takes place in New York, sponsored by the New York Academy of Sciences and the National Institute of Mental Health.

- 1985 The National Institutes of Health sponsor a Consensus Development Conference on Electro-Convulsive Therapy in Bethesda, Maryland. At the conclusion of the conference, a Consensus Statement is presented.⁸

Efficacy, Indications and Contraindications

This chapter summarizes the scientific evidence as to whether ECT is effective for patients with certain mental disorders, and outlines the evidence that indicates when ECT is or is not an appropriate treatment. As well, the perceptions of former patients, and families of former patients, regarding experiences with ECT are reviewed.

A. THE SCIENTIFIC LITERATURE

The following observations are based primarily on: several articles which review the scientific studies of ECT;¹⁻⁷ the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM III);⁸ and the Consensus Development Conference Statement⁹ which was published following a recent conference on ECT sponsored by the National Institutes of Health in the United States.

A glossary of medical terms is provided for reference at the end of this Report.

EFFICACY

An early hypothesis held that there exists a biological antagonism between epilepsy (a seizure disorder) and schizophrenia and that, therefore, schizophrenia might be effectively treated by induced seizures. However, psychiatrists from the beginning were almost unanimous in finding that electrically induced seizures (ECT) were more helpful for patients suffering from depressive disorders than they were for schizophrenic patients.

During the first 10 to 15 years of ECT use, there were difficulties in specifying the mental disorders for which ECT was effective because:

- . There was lack of agreement on the essential clinical features of schizophrenia.
- . It was difficult to distinguish among various types of depressive disorders.
- . For some patients, the effect of ECT was moderate and unsustained.
- . Placebo effect of ECT occurred for some patients.

In the last 10 to 20 years, there has been some narrowing of the range of disorders for which ECT is indicated and alternative treatments have been developed. These factors and others have led to a decline in the use of ECT. For example:

- . Accumulated clinical experience and controlled studies of ECT use have suggested that it is effective only for certain types of depressive disorders, not all depressive disorders.¹⁰
- . The introduction of effective antidepressant drugs has provided a reasonable alternative to ECT for the treatment of some depressed patients.
- . Neuroleptic drugs produce generally better results than ECT when used to treat patients with schizophrenia.

According to the materials reviewed, ECT is most likely to be effective in treatment of patients whose depression has endogenous features¹¹ and is likely to be especially effective where there are melancholic features as described in DSM III.¹² ECT is also effective in those depressions of bipolar disorder (manic-depressive illness) where there are endogenous features. It is also effective for treating a depressive episode characterized by psychotic features, particularly pathological delusions; when motor or psychic retardation (slowing) are apparent; or when there is marked agitation. It may also be effective for those depressive disorders with only some endogenous features which have proven non-responsive to an adequate trial of antidepressant drug treatment.

There is evidence in the scientific literature that ECT is effective in terminating manic episodes, although ECT has not been used as often as have other treatments for manic patients. There is also evidence in this literature that ECT is somewhat effective in treating some patients with schizophrenia, particularly when illness duration has been two years or less and the following clinical features are present: 1) catatonic stupor or excitement; or 2) affective (mood) features.

According to the scientific literature, the efficacy of ECT in the treatment of other conditions is uncertain. It may be effective in treating miscellaneous psychoses (especially those beginning during pregnancy or immediately after childbirth) which are not clearly related to coarse brain disease, when these conditions are non-responsive to other treatments.

INDICATIONS

ECT is indicated in the treatment of those conditions described above for which it has been proved effective, with the proviso that the expected improvement should clearly outweigh the expected untoward effects of treatment. Since psychiatric diagnoses alone do not convey complete information about the severity of a patient's condition or the urgency of the need for treatment, other factors have to be taken into account.

According to the materials reviewed, the indications for ECT are as follows:

1. Affective (Mood) Disorders

Since improvement in depressive disorders when treated with ECT is likely to be more prompt than when treated with antidepressant drugs, some of the factors for which the use of ECT is indicated are: the risk of suicidal behaviour, the degree of suffering of the depressed patient, and the possibility of physical deterioration (from dehydration or inanition because of refusal to eat).

ECT is also indicated to treat depressive disorders which are non-responsive to antidepressant drug treatment, and depressive disorders in those patients where the expected morbidity from drug treatment poses a serious health risk to the patient.

ECT is indicated to treat manic patients who are so severely disturbed that they are at risk for serious health problems, even death, from exhaustion unless treated promptly; or serious morbidity from the high doses of drugs required to control their excited behaviour. ECT is also indicated to treat those manic patients who are apparently non-responsive to drug treatment.

2. Schizophrenia

The scientific literature suggests that, although ECT may be indicated for reducing the "positive" features of schizophrenia (thought disorder, delusions, hallucinations), it is not the treatment of choice.¹³ ECT may be indicated for schizophrenic patients who are unusually sensitive to the side effects of neuroleptic drugs; who have proven to be non-responsive to neuroleptic drug treatment; or who suffer from tardive dyskinesia (an involuntary movement disorder resulting most often from chronic use of neuroleptic drugs), where the further use of neuroleptic drugs is undesirable.

The questionable efficacy of ECT in the treatment of other disorders indicates that it be used only when adequate trials of alternative treatments have failed to produce improvement and when there is a reasonable possibility that ECT will be effective.

CONTRAINDICATIONS

Conditions which produce increased intracranial pressure are generally agreed to be absolute contraindications to ECT.

However, most contraindications are relative. As with any treatment, contraindications against the use of ECT must be defined in relation to the risks of withholding the treatment, especially where the patient's mental disorder is a potentially life-threatening one (as severe depression or mania may be).

Relative contraindications to the use of ECT include aortic or cerebral aneurysm, intracerebral hemorrhage, recent myocardial infarction, threatened retinal detachment, and the presence of an unstable vertebral column.

ECT may be potentially more dangerous for some patients than for others, because of the transient tachycardia and increase in blood pressure produced during an induced seizure. An expert opinion from the appropriate medical specialist is indicated for patients with pre-existing conditions that may place them at risk in the administration of ECT.

For patients whose work requires a clear and precise memory, ECT is probably contraindicated.¹⁴ However, when there are strong clinical indications for ECT, or when the patient has been non-responsive to other treatments, ECT may still be considered. It should be noted that complaints of memory disturbance are highly variable, and some patients whose work depends on the preservation of an intact memory may not even perceive that they have experienced some memory impairment.¹⁵

B. PUBLIC PERSPECTIVE

During the course of its work, the Committee became aware of strong views of both advocates and critics of ECT. The Committee received over 250 submissions from the lay public, the majority of which were from either former patients or their families. Most of the treatments reported by former patients and their families were administered between 1950 and 1984, though there were a few reports of earlier treatments. Some former patients who had received ECT said that ECT had been effective for them; whereas others said that it had not been helpful and, in some cases, had even been harmful. The submissions were virtually evenly divided between those who believed ECT had greatly benefited them and in some cases saved their lives, and those who believed ECT had destroyed their lives. The views were rarely in between these two extremes and were strongly expressed. Many ex-patients who had negative feelings towards ECT reported that it had been a terrifying experience, abusive, and an invasion of their right to autonomy. It is of interest that ECT was perceived more positively by those individuals who had consented personally to the treatment and who felt that sufficient information had been furnished before treatment.

COMMENT

The Committee had the benefit of the clinical experience and knowledge of physician members in preparing its observations on the current status of scientific knowledge regarding the efficacy of ECT and the indications and contraindications for its use.

A minority of the Committee placed a great deal of weight on the shortcomings of many of the original research studies, as identified in the review articles, in that the results of some studies were inconclusive and contradictory, and some suffered from methodological flaws. In the minority's opinion, the efficacy of ECT has not been proved. However, it was the opinion of the majority of the Committee that, although some of the original studies were flawed, there is a reasonable basis in the body of research as a whole, considered along with the clinical observations of physicians, to conclude that when ECT is administered under current methods and for the appropriate indications, it is often effective. This is not to say that ECT is a cure, for it does not prevent recurrence of a disorder.

The submissions received by the Committee from individuals were very helpful in providing insight into the perspective of former recipients of ECT as to its effectiveness. The Committee was impressed by the obvious sincerity and candor of the views expressed. It is apparent that some individuals were convinced that ECT helped them greatly. On the basis of such views, along with the scientific and clinical support for ECT's efficacy, the Committee recommends that ECT continue to be available as a mode of treatment in Ontario. However, it is recognized that extensive safeguards should be put in place to ensure high standards of medical care as well as protection of individual rights. Accordingly, the legal, ethical and moral issues relating to ECT in particular, and treatment in a psychiatric facility generally, are addressed by the Committee in the chapter of the Report entitled Consent.

To ban this treatment would be demonstrably unjust to those individuals who provide free and informed consent to a medical procedure which they believe offers them the hope of a better and more useful life and, in some cases, may even be life-saving.

One member of the Committee is strongly opposed to the continuance of ECT. Given the acceptance of the Committee's recommendation that ECT be continued as an available treatment, this member would support the other recommendations contained in this Report. Another member of the Committee chose not to express an opinion with respect to this recommendation and other recommendations which have medical implications.

Adverse Effects and Risks

Most medical procedures pose some risks and have some adverse effects. These are minimized by correct diagnosis and proper use of the procedure for the appropriate indications. The risks and adverse effects must be weighed against the expected benefits of treatment as well as the risks and adverse effects of alternative treatments or no treatment at all.

Some of the risks and adverse effects of ECT have been largely eliminated or substantially reduced by advances in technology and methodology. For example, the use of anaesthesia, muscle relaxants and oxygenation have removed the threat of long bone and spinal fractures. However, optimal modern ECT techniques have not entirely eliminated all risks and adverse effects.

The subjects that will be dealt with in greatest detail in this chapter are memory impairment associated with ECT and the question of whether brain damage results from the procedure. These subjects have received considerable attention both in the scientific community and among members of the public.

A. THE SCIENTIFIC LITERATURE

In the early years of ECT the death rate was estimated at one in a thousand patients. With improved methods of administration in recent years, the rate has been reduced to a current estimate of one in 3,300 patients or one in 22,000 treatments.¹ These figures indicate the risk of death per ECT treatment is similar to the risk associated with minor surgical procedures requiring a general anaesthetic.

A variety of adverse effects have been reported in the scientific literature, some of which occur rarely. These effects include disorientation and confusion on the

day of the treatment; dizziness, nausea and vomiting immediately after the treatment; and muscle aches and weakness for a day or two following the treatment. Headaches have been reported as being minimal and usually alleviated by a mild analgesic. There may be transient hypertension or hypotension lasting for a few minutes after the treatment. Patients have been known to have occasional seizures up to a year after the treatments are terminated.

Some other conditions have been reported after ECT treatments, including: amenorrhea, impotence, ulcers, anorexia, palpitations, bleeding of the ear and disarticulation of the temporomandibular joint. It has not been established that these other conditions are caused by ECT.

ECT AND THE BRAIN

ECT has effects on the brain which are both structural (anatomical) and functional (e.g. affecting brain activity or blood flow in the brain).

The primary functioning units of the brain are nerve cells, which make up a large percentage of the brain's bulk. The other cells of brain tissue are the glial (supportive, non-functioning) cells and blood vessels. While structural changes in glial cells and blood vessels might have some indirect effect on brain function, damage to nerve cells would have a much more direct effect, and death of nerve cells would be expected to result in permanent impairment, since nerve cells, once lost, can never be replaced.

Structural Effects of ECT on the Brain

Of the structural changes which have been reported to follow ECT, those which, though irreversible, are not known to be associated with impaired brain function (e.g. scarring of blood vessels and gliosis) or those which only affect brain function transiently (e.g. acute cerebral edema) are of less concern than those in which permanent loss of brain function is to be expected (e.g. nerve cell loss).

The structural effects of ECT on the brain have been studied using the following approaches: experimental animal models of ECT and epilepsy; examination of post-mortem tissue of patients who died during or shortly after ECT; examination of the human brain after ECT by computerized tomography by the brain (CAT scans), by identification of changes in the permeability of the blood brain barrier,

and by biochemical analysis of brain tissue, cerebrospinal fluid and blood. (A detailed summary of the scientific literature on the structural effects of ECT on the brain is attached as Schedule "G" to this Report.)

There are several factors which might cause structural changes in the brain during ECT. It is not known to what extent the changes which have been reported are the result of the flow of electrical current through the brain; the result of the ensuing seizure; or the result of systemic factors such as hypertension or anoxia occurring in the course of the seizure.

There is little experimental work directly addressing the question of electrical damage from ECT. Any tissue will be damaged if sufficient electrical current is passed through it. However, the density of current in brain tissue during ECT is difficult to determine with precision. There is reason to believe that there is a fairly wide margin of safety between the density of current produced with ECT and that necessary to produce brain damage.²

Damage to the brain that could be attributed to the ECT seizure has been studied by way of experimental animal models of epilepsy (where the seizure is not electrically induced). One such study showed no nerve cell loss with continuous unmodified seizures of up to 82 minutes, or even longer (up to three hours) continuous seizures which were modified by muscle paralysis.³ These results suggest that modification of seizures by temporary muscle paralysis lessens the likelihood of brain damage attributable to seizure activity. It is worth noting that seizures during ECT as administered in human beings last less than one minute, in contrast to the very lengthy seizures in the above experiment. Researchers who conducted a post-mortem examination of two patients who had received numerous courses of ECT over several years found some structural changes to blood vessels and glial cells.⁴ They concluded that the changes were similar to those seen in the brains of some epileptic patients and thus attributable to seizure activity rather than the electric current.

Systemic factors such as hypertension and anoxia which can occur in the course of an ECT seizure could potentially cause structural damage to the brain. One researcher who reviewed studies of 38 human post-mortem examinations suggested that pre-existing cardiac, vascular or renal disease may predispose a person to cerebral injury with ECT.⁵ Few cases have been reported where these complications have been excluded. With modern anaesthetic management, such pre-existing factors are seldom unrecognized or untreated prior to ECT.

Shortly after ECT was introduced, a number of attempts were made to duplicate the effects of ECT in experimental animals. There were many differences in technique, and a number of factors now believed potentially damaging to the brain were not controlled. There was little consistency in the reports of structural brain damage, which included variously: scarring and other alterations of cerebral blood vessels; recent and older haemorrhages; cerebral edema (increased water content of brain tissue); gliosis (increased number, size and fibre content of the supportive, nonfunctioning cells of the brain); and nerve cell damage and loss. A critique of these early animal studies is included in Schedule "G" of this Report.

Three more recent controlled studies of ECT on experimental animals since the early 1970s^{6,7,8} found no evidence of nerve cell loss. The absence of evidence of such permanent damage to the mature brain as would impair brain function in these three studies is noteworthy, since the experiments were well controlled and the histological techniques of high quality. Inasmuch as the above experiments all employed unmodified seizures, there may be an additional margin of safety where modified ECT is used.

However, it is probably impossible to prove conclusively by experimental means that ECT-induced nerve cell loss does not occur. This is a problem in the evaluation of many brain diseases and is not unique to the evaluation of brain damage following ECT. A small loss of nerve cells may be very difficult for a pathologist to recognize or quantify. A dead nerve cell is relatively easy to identify shortly after its death, but in a few days such a cell will disappear, usually without leaving a trace to indicate its loss.

The structural basis and mechanisms of memory are to a large extent unknown. Indeed, it is unknown whether memory loss following ECT has any structural basis. There is some suspicion that memory and normal brain protein synthesis (production of protein by brain cells) are somehow related and that memory loss with ECT might be expected to be associated with alterations in protein synthesis in brain tissue. One of the researchers who did not find nerve cell loss following ECT did find reduced brain protein synthesis.⁹ Another found ECT to interfere with protein synthesis but the effect was transient and thus not clearly indicative of structural brain damage.¹⁰

By way of summary, the following conclusions can be drawn from the scientific literature with respect to structural effects of ECT on the brain:

- . Some animal experimental models of ECT developed over 30 years ago, showed some irreversible and functionally significant changes of brain tissue, but these models differed in so many respects from contemporary modified ECT that it is difficult to draw any conclusions from them. More recent studies have failed to show permanent damage to the mature brain.
- . Some irreversible structural changes of brain tissue (scarring of blood vessels and gliosis) have been reported in human post-mortem material from patients who had received ECT. These changes are attributable to ECT but are not known to be responsible for any alteration of brain function.
- . Many of the changes of brain tissue described in human post-mortem material from patients who had received ECT are attributable to pre-existing brain disease or to systemic factors (anoxia and cardiovascular collapse) which are unlikely to present serious difficulties with modern management.
- . Experimental animal models of epilepsy suggest that the seizure of modified ECT is highly unlikely to cause brain damage.
- . Brain damage from modified ECT has not been proved. Further experimental work might shed further light on the question. However, in view of the inherent limitations of animal models, the exclusion of the possibility that ECT induces brain damage is probably unattainable by means of animal experimentation.

Functional Effects of ECT on Memory

Although there is not clear evidence in the scientific literature of structural damage from modified ECT that would impair brain function, there is ample evidence of ECT having an adverse functional effect on memory.

Ever since ECT was first used, it has been noted that an adverse effect on memory is an almost invariable sequel. Patients after the convulsion pass through a confusional period during which they tend to be disoriented and to forget sensory impressions as soon as the stimulation is withdrawn. The extent, duration and severity of the post-ECT period are found to vary with different individuals and to depend on a number of factors such as the time after treatment at which memory is assessed, how it is assessed (i.e., by recognition or by recall) and the nature of the stimuli the subject is asked to remember.¹¹

There is a considerable scientific literature examining cognitive changes, including memory changes, that result from ECT. Cognitive functioning refers to all the processes by which information is transferred, reduced, elaborated, stored, recovered and used in the brain. As such, the cognitive processes include sensation, perception, imagery, attention, memory, problem solving and thinking. The Committee is particularly concerned here with the effects ECT has on memory and, to a lesser degree, perception, as these are the areas of cognition that patients complain about or that have been found to be altered. Attention plays an important role in memory because information that is not encoded (i.e., it doesn't get into the memory store) obviously cannot be retrieved.

The following observations are based on the Committee's study of several reviews of the scientific literature on the effects of ECT on memory.^{12,13,14,15}

ECT can cause both retrograde and anterograde amnesia. Retrograde amnesia refers to the difficulty of recalling events preceding the onset of the amnestic period. Anterograde amnesia refers to the difficulty of learning new skills and of retaining events that occurred after the onset of the amnestic period. For our concerns, the amnestic period begins at the time of ECT. While clinical observations of memory functioning are made after each treatment, the comprehensive assessment for memory impairment is usually conducted after a course of ECT treatments.

Two main methods, recall and recognition testing, are used to test memory functioning after ECT. Testing memory by a recall test simply involves asking the person to remember certain events. All memories are reconstructed and, as such, are subject to distortion. When one recalls an event, bits of information are retrieved from memory. It is not expected that all parts of the event will be recalled. In contrast to testing for recall, testing for recognition involves presenting persons with a series of events or objects and asking them to identify

the ones they have seen before. Recognition tasks are easier for people than are recall tasks, as the recognition test procedure provides cues that help them to retrieve information from their memory.

Most memory tests assess a person's ability to remember new information (either verbal or nonverbal) as presented by the clinician. Recent memories are easier to test than more remote memories. Therefore, testing for anterograde amnesia is easier than testing for retrograde amnesia. Testing of remote memories is difficult because one has to isolate events in the past that occurred at one point in time without overlapping other periods. Finally, the content of the memory test is important. Does the clinician assess the person's memory for standard content (e.g. historical events that occurred during 1963) or for autobiographical memory (e.g. what personally relevant events happened to you in 1963)? Autobiographical memory tests which evaluate the individual's own personal memories are difficult to develop as they are not easily standardized.

There is some evidence that one factor affecting the degree of memory following ECT is the amount of electrical power administered to produce the seizure. This aspect of ECT is dealt with in greater detail in the chapter of this Report on Equipment.

Another factor that affects the degree and the nature of memory loss following ECT is the placement of electrodes for delivering the electrical stimulus which precipitates the seizure. In bilateral ECT, one electrode is placed on each side of the brain, so that the electrical stimulus passes through both the right and the left hemispheres. It has been found that memory loss may be reduced with unilateral placement of the electrodes on only one side of the brain so that the current passes through only one hemisphere.

In unilateral ECT treatment the convulsion may be precipitated either in the dominant or nondominant hemisphere of the brain. The dominant hemisphere is the one responsible for verbal information processing and is determined by assessing the handedness of the individual (as well as preferred foot and eye) and by other more sophisticated tests. The nondominant hemisphere is the one primarily responsible for nonverbal (visuo-spatial) information processing. In most people, the left hemisphere is dominant and the right hemisphere is nondominant. Unilateral nondominant ECT may selectively impair nonverbal memory, while unilateral dominant ECT may selectively impair verbal memory.

Whether bilateral or unilateral ECT is to be preferred in all or in particular cases remains controversial. Some clinicians perceive bilateral ECT as producing a therapeutic effect more rapidly than unilateral ECT. Some have the impression that certain individuals only respond to bilateral ECT.

The following conclusions can be drawn from the Committee's consideration of scientific literature reviews with respect to the effects of ECT on memory:

- . Clinical improvement from ECT does not require an adverse effect on memory (i.e., ECT does not work by producing memory loss). Therefore, treatments that produce the convulsion while having minimal effects on memory are most desired.
- . ECT causes temporary (20-30 minutes), but not longer term, changes in perception.
- . ECT may cause both retrograde and anterograde amnesia. Greater amnesia of both kinds occurs with bilateral ECT than with unilateral ECT.
- . The severity of anterograde amnesia depends on the time which has elapsed between ECT and the new learning in question. Individuals treated with ECT have more trouble with new learning close to the time ECT was administered. The actual time course of recovery from anterograde amnesia due to ECT is not clear but seems to be substantially complete by six to nine months post-ECT. But at present it is not possible to predict how long such recovery will take. Bilateral ECT causes greater anterograde amnesia than unilateral nondominant ECT for both nonverbal and verbal memory.
- . Research indicates that bilateral ECT induces a global anterograde amnesia which is characterized by good immediate but rapid forgetting. Memory is best on recognition testing and worst on recall testing. Recovery from this global anterograde amnesia is substantially complete within 30 to 45 minutes after the treatment.
- . Retrograde amnesia is more severe with increased number and frequency of ECT treatments.^{16,17} Retrograde amnesia is characterized by a temporal gradient, with more events being forgotten close to the time

ECT was administered compared to events that occurred well before the treatment. Recall of the sequence of events is more sensitive to impairment than other aspects of retrograde amnesia.

- . Recovery from retrograde amnesia following ECT is substantially complete by six to nine months after ECT, with the restoration of memories that had been lost. However, a number of patients (one estimate was 1 in 100) may have some permanent retrograde memory impairment. Some memories of events occurring up to two years before ECT, as well as events around the time of ECT may be lost permanently. The impact of such memory loss on a person's functioning in the present is unclear.
- . One preliminary study of the elderly in the recent literature¹⁸ points to the possibility of a longer lasting effect of previous ECT treatment in the elderly. Older depressed patients with a history of previous ECT exhibited greater cognitive dysfunction (e.g. visuo-spatial skills, cognitive flexibility) than older depressed patients with no previous ECT.
- . In cases where objective evidence of memory dysfunction is not observed, patients will nevertheless often complain of memory impairment several months after ECT treatment. These complaints are more frequent following bilateral than unilateral ECT. One proposed explanation is that patients who have experienced a memory loss following ECT may tend to attribute any changes in their memory to the past ECT treatment. In addition, these individuals may be generally more sensitive to changes in their memory because of their experience with ECT.

B. PUBLIC PERSPECTIVE

In almost all the submissions received by the Committee from the lay public, there were reports of memory loss of varying degrees. Some complained of long lasting adverse effects, including substantial memory impairment, spontaneous seizures, severe headaches, and loss of particular abilities. A few individuals indicated that, although they experienced some permanent memory loss, it was preferable to the symptoms of their illness. Some individuals reported that they had experienced no adverse side effects at all.

COMMENT

The scientific literature is inconclusive as to whether ECT causes structural brain damage. It is simply not known. It is, however, known that ECT does cause memory loss ranging from minor and transient to more severe and long term. It is clearly of less concern when memory loss is transient and brief than when it is permanent or long lasting. There is some evidence that the amount of memory loss is reduced with unilateral nondominant electrode placement and decreased electrical dosage.

There is no doubt that there are risks and adverse effects associated with ECT, as there are with most medical procedures. Some of the risks and adverse effects reported both in the scientific literature and in personal submissions have been substantially reduced or largely eliminated by the use of modified ECT. However, the possibility of risks and adverse effects must be considered and balanced against those of alternative treatments or no treatment at all, and must be considered in light of the individual patient's needs and wishes. Information about risks and adverse effects must be disclosed and the patient must be involved in the decision making process, as discussed in greater detail in the chapter of this Report entitled Consent.

Procedural Aspects

The ECT procedure, in brief, involves the passage of a controlled electrical stimulus between scalp electrodes over one half or both halves of the brain to induce a generalized seizure (grand mal convulsion). An anaesthetist first prepares the patient for the treatment by administering a general anaesthetic and giving a muscle relaxing drug in order to ensure the least possible muscular contraction or jerking during the seizure. Oxygen is given throughout to compensate for the brain's increased need for oxygen during the procedure. When the patient's muscles are optimally relaxed, the electrical stimulus is administered to induce a seizure which lasts under a minute. The patient awakens a few minutes later and is observed in a recovery area until fully awake and recovered and able to return to the ward (or home, in the case of out-patients). The treatment as currently administered is referred to as modified ECT.

The Ontario Medical Association and the Ontario Psychiatric Association jointly submitted a position paper to this Committee, in which they outlined what they believed to be appropriate current procedures for the administration of ECT. The portion of their paper that deals with personnel, equipment and procedure is appended as Schedule "H" of this Report. Those aspects of ECT procedure that are dealt with in the position paper are summarized below, with emphasis on the basic principles therein rather than on detailed medical applications which a person without medical knowledge and qualifications could not evaluate.

Personnel

- ECT to be administered by a physician knowledgeable in the indications, contraindications and adverse effects of ECT, and in the technical aspects of its administration. Psychiatric residents may administer ECT under direct supervision of a psychiatrist.

- . Nursing staff to be knowledgeable in ECT and potential complications, for assisting during and after ECT administration.
- . Anaesthetic to be administered by a physician who is knowledgeable in recognizing and dealing with the complications of general anaesthesia and in the technical aspects of its administration. Residents in anaesthesia may administer anaesthetic under the direct supervision of an anaesthetist.¹

Equipment

- . Modern ECT device that allows optimum control of electrical stimulus.
- . EEG and ECG devices for continuous monitoring of brain and heart activity.
- . Modern anaesthetic machines with features for monitoring and dealing with complications.

Procedure

- . Pre-treatment medical screening which may dictate against ECT or necessitate precautions.
- . Ongoing reassessment during a course of treatments and monitoring of response, side effects and need for continued treatment.
- . Anaesthesia, muscle relaxants and oxygen administered so as to minimize side effects of the seizure. Teeth protected with a mouth bite.
- . Placement of electrodes for optimum therapeutic effect and minimum risk.
- . Determining and administering level of electrical stimulus that produces optimum therapeutic effect.
- . Establishing appropriate frequency of treatments for optimum therapeutic effect and minimum side effects.
- . If there is not satisfactory improvement, the number of treatments should not exceed 15 before a complete review of diagnosis and management is carried

out. Such a review may well be indicated before the completion of a course of 15 treatments.

- . For each treatment, recording of seizure duration (a possible element in patient response to ECT), which should be considered in assessing the need for further treatments.
- . Post-treatment care, including: monitoring of vital signs before transfer to recovery room; patients must be constantly attended by nursing staff until fully recovered from anaesthetic; in the case of out-patients, several hours hospital observation (or return home in company of responsible adult).
- . Follow-up medication after ECT, where appropriate, to prevent relapse.

One of the Committee's tasks was to ascertain the existence of written procedures outlining criteria and standards. The Committee developed a questionnaire which was sent to 86 psychiatric facilities throughout the province. A copy of this questionnaire is appended to this Report as part of Schedule "B", and its distribution list appears as Schedule "C". Responses were received from 52 facilities, of which 7 stated that ECT is not administered at their facilities.

The responses to the questionnaire indicated some consistency of practice. For example, the use of modified ECT with general anaesthesia, muscle relaxants and oxygenation appears to be the norm. The usual frequency of treatments appears to be two or three times a week. (By way of comparison, in the United States the usual frequency is three times weekly; in the United Kingdom, it is two times weekly.²⁾)

However, in some other aspects, the responses indicated considerable variation in practices. For example, ECT is not always administered by the patient's own physician. In some facilities a second opinion is always obtained before ECT is used; in others a second opinion is obtained on request of the patient or physician. In some facilities ECT is prescribed by course (series of treatments), whereas in others it is prescribed by individual treatment. Variation is also evident in the frequency of maintenance of ECT equipment, a subject which will be dealt with in the chapter of this Report dealing with Equipment.

COMMENT

The Committee recognizes that the strictly medical aspects of ECT procedures are within the jurisdiction of the medical profession. It is the responsibility of the profession to set and maintain standards; to conduct research to update standards; and to ensure that there is compliance with such standards.

The Committee as a whole does not express any opinion on the strictly medical aspects of the procedures for the administration of ECT. Accordingly, the Committee cannot, for example, comment on the merit of the model medical procedures proposed in the position paper on ECT of the Ontario Medical Association and Ontario Psychiatric Association. However, there are certain related policies and procedures whose merits are of a general nature and it is such policies and procedures that are the subject of the Committee's specific recommendations.

The strictly medical procedures aside, the Committee makes the following recommendations.

A patient should be re-evaluated after each ECT treatment, whether prescribed by a course of treatments or otherwise, and ECT should not be continued until the patient has been assessed as to desired improvement and severity of those side effects that are cumulative.

A patient has a right to expect that their his or her own physician be present during the administration of ECT where possible; and, if not present, the patient's physician must be satisfied that the physician administering ECT is experienced in the use of the procedure and is familiar with the patient's clinical status and history.

There should be a second psychiatric consultation in each of the following situations:

- (1) The patient or the physician requests a second opinion.
- (2) The patient is incompetent to make a decision about treatment.

- (3) The patient's disorder falls outside the commonly accepted clinical indications for ECT. (See the chapter of this Report entitled Efficacy, Indications and Contraindications.)
- (4) The patient is suffering from a depressive disorder and has received 12 treatments without significant improvement.
- (5) The patient is suffering from schizophrenia and has received 15 treatments in one course of ECT without significant improvement.

Of the 45 facilities that completed the Committee's questionnaire on ECT policies and procedures, most did not furnish written clinical procedures for the treatment. The Committee believes it is highly desirable that written clinical procedures be in place in each hospital in which ECT is administered.

The Committee further recommends that each facility in which ECT is administered establish an ECT Audit Committee, along the lines of other medical audit committees, to ensure that the appropriate clinical procedures are followed in the administration of ECT and that only those individuals qualified to do so are authorized to administer ECT.

ECT is a complex medical procedure with many variables to be considered in administering the treatment. It requires a skilled team that is familiar with the complexities.

Education and training in the theory and techniques of administering ECT should form a part of medical school curricula. The Committee agrees with the recommendation of the National Institutes of Health Consensus Development Panel that medical school curricula should include education in the use of ECT for undergraduates and that psychiatric residency programs "should include complete ECT training: indications, contraindications, risks, clinical management, informed consent, and evaluation of outcome."³

The Committee observes the importance of continuing education for physicians using ECT in their clinical practice. Hospitals should formulate rules and regulations to govern the granting of hospital privileges for the administration of ECT, which may include continuing education requirements.

Equipment

ECT equipment is designed to provide electric current to the brain of a patient. In its simplest form, the device consists essentially of a transformer and a timer.¹ The apparatus delivering the stimulus can be characterized as either a voltage source (delivering a prescribed voltage time course such as a sinusoidal or pulsatile waveform), or a current source (where the current is prescribed), or as a source with characteristics of both.

The stimulus provided by the ECT machine can be an alternating current of a frequency equal to the line frequency (60 Hz in North America), which is otherwise known as a sinusoid; or the stimulus can be a partial sinusoid or brief pulses.

With evidence that some of the side effects of ECT, especially memory loss, are proportional to the electrical dose,² and that the therapeutic effect of ECT depends on the convulsion alone, not the dose per se, there have been a number of developments in equipment:

1. Most significantly, there has been a trend towards the use of brief pulses instead of sinusoids. About one third of the dose is required to reach seizure threshold with brief pulse stimuli as opposed to sinusoidal stimuli.^{3,4,5}
2. It has been shown that the use of a current source as opposed to a voltage source gives a better controlled dose because of the variable resistance of the electrode skin interface. Consequently, current source stimulators are becoming more popular.
3. There has been a trend towards better stimulus parameter control, so that the dose can be "titrated" for the individual patient. The

parameters controlled include voltage or current, pulse width, pulse frequency, and pulse duration.

4. Some recent ECT instruments have built-in EEG and ECG monitoring.
5. Modern ECT devices often come with self-checking features, such as an automatic enabling circuit when the electrode impedance (resistance) is in an acceptable range. This prevents unnecessary skin burns, which can occur when electrode contact is not perfect. It also ensures that all of the intended stimulus energy is deposited in a well defined manner in the brain, thus avoiding unnecessary sub-threshold stimuli.

World-wide market for ECT devices is not very large from a medical instrumentation manufacturer's point of view, so it is not surprising that there are few manufacturers of this particular product.^{6,7}

Some of the popular ECT machines are:

1. Medcraft B24 III Electro Convulsive Therapy Instrument, manufactured by Hittman Corporation, U.S.A. This is an instrument of the "sinusoidal voltage source with timer" type. It has a primitive manual compensation for line-voltage fluctuations, and an unspecified "test patient module" which allows the operator to check the integrity of leads and connections.
2. An ECT device developed at the Department of Biomedical Engineering, University Hospital, London, Ontario, and manufactured by Henderson Industries. This device is also basically a "sinusoidal voltage source with a timer," but it does have some additional features. The voltage is servo-controlled so that it remains constant for different or variable loads. The voltage can be adjusted between 0 and 230 volts. If the patient impedance is low, (in the range of 50 to 500 ohms), the current will be limited to less than 770 mA to protect the patient.
3. Mecta Model D, manufactured by Mecta Corporation, U.S.A. This instrument provides bidirectional (alternating positive and negative)

current pulses of a standard amplitude (800 mA), but of controlled pulse width, pulse frequency, and stimulus duration. The pulse width can be set between 0.15 and 1.5 milliseconds and the pulse frequency between 20 and 70 pulse pairs per second. It is possible with these parameters to control the power to the patient between 0.39 watt and 53.76 watt, assuming a patient impedance of 200 ohm. The stimulus duration can be set between 0.5 and 2.0 seconds, allowing energy (with the 200 ohm patient impedance) between 0.20 and 107.5 joule to be deposited between the electrodes. In addition, the Mecta has an EEG Section, which allows the operator to monitor brain activity before and after the stimulus application. This gives a helpful indication of the quality of a convulsion, and has been reported to reduce the number of restimulations required.⁸ An additional feature is the ECG Section which allows for monitoring of heart activity.

COMMENT

From the responses received to the Committee's questionnaire on policy and procedures (a copy of which is appended to this Report as Schedule "B"), it appears that at least eight manufacturers are represented in the province of Ontario and the number of models in use is greater. The modern machines (e.g. Mecta Model D) are well represented and it would appear that many institutions are replacing their ECT machines with up-to-date equipment. However, there appears to be a wide variation in the maintenance of these machines. Although some facilities have a formal arrangement for regular maintenance by a qualified outside service organization, many appear to provide no regular maintenance for their ECT equipment.

The Committee believes that the provision of safe, up-to-date, and regularly maintained ECT equipment is a necessary and basic requirement for the protection and safety of patients receiving this treatment.

The Committee recommends that the Ministry of Health, in consultation with the Ontario Hospital Association, the Ontario Medical Association and other appropriate bodies, develop and establish minimum standards for ECT equipment (including minimum performance specifications), and that all ECT equipment in use in Ontario be required to meet such minimum standards. The Committee

further recommends that ECT equipment be maintained and calibrated at least every six months by a qualified clinical engineer. To ensure compliance, it may be necessary to set out the minimum requirements as a regulation under the Mental Health Act.

At present, dose measures from different devices cannot be related to one another. Standardized measurement devices should be required for ECT equipment, to enable comparisons to be made of the amount of current administered in different clinical settings. Most importantly, such standardization may contribute to a reduction of the amount of current used in many clinical settings.

The Committee recommends that EEG equipment be available to monitor brain activity concurrently with the administration of ECT, to allow measurement of the length and duration of the seizure as well as the success of the attempt to induce convulsion.

Data and Record Keeping

The Committee set out to obtain information regarding the use of ECT across the Province, which would enable it to establish a basis for objective analysis. The terms of reference specifically directed the Committee to examine and analyse, among other things, the following aspects of ECT use in Ontario (past and present):

- . Number of patients receiving ECT as a function of status, age, sex, diagnosis, source of consent.
- . Follow-up of patients receiving ECT.
- . Number of treatments per patient per admission.

In an effort to collect this and other relevant information, the Committee requested statistics on ECT from the Ministry of Health, the Coroner's Office and the Regional Boards of Review. The Coroner's Office had no information, and only some of the Review Boards had even limited information. The Ministry of Health provided the Committee with the data set out in the table on the following page.

The table discloses the total number of ECT procedures in Ontario over a six-year period. The number of patients receiving ECT was only available from the provincial psychiatric hospitals. It should be noted that the same patient may have been counted in more than one year, and indeed may have been counted more than once in a single year if admitted to hospital more than once that year.

The Committee also contacted the Hospital Medical Records Institute (HMRI) in an attempt to obtain more detailed statistics on the incidence of electroconvulsive therapy in Ontario hospitals. HMRI collects data on in-patients from

ESTIMATED NUMBER OF ECT PROCEDURES IN ONTARIO

1978/79 to 1983/84

<u>YEAR</u>	<u>PROVINCIAL PSYCHIATRIC HOSPITALS*</u>		<u>NON-GOVERNMENT HOSPITALS**</u>		<u>TOTAL</u>	
	<u>No. of Procedures</u>	<u>No. of Patients</u>	<u>No. of Procedures</u>	<u>No. of Patients</u>	<u>No. of Procedures</u>	<u>No. of Patients</u>
1978/79	4,017	520	18,848	—	22,865	—
1979/80	4,650	644	17,549	—	22,199	—
1980/81	4,979	686	15,887	—	20,866	—
1981/82	4,830	710	16,157	—	20,987	—
1982/83	4,038	572	15,383	—	19,421	—
1983/84	*	*	14,994	—	*	—

* Figures for provincial psychiatric hospitals were provided by the individual hospitals through the Ministry of Health. The 1983-84 data for provincial psychiatric hospitals were not available at the time this information was gathered.

** Figures for the number of procedures for non-government hospitals are based on OHIP physician service claims. Statistics on the number of patients who received the services are not available.

public hospitals and a small number of other facilities; however, data on out-patients and from the provincial psychiatric hospitals are not captured. For those hospitals that do participate in the system, the HMRI abstract captures an array of clinical data on each in-patient who is discharged or dies in hospital. One of the data blocks on the HMRI abstract calls for the recording of each surgical and non-surgical procedure.

However, HMRI advised the Committee that, in general, non-surgical procedures are grossly under-reported by hospitals. HMRI sampled its data base in an attempt to measure the incidence of ECT in Ontario hospitals and found a pattern of under-reporting or non-reporting as well as inconsistency in reporting. The Committee was discouraged by HMRI from pursuing data on ECT by way of the HMRI system, as such data were unreliable.

As there appeared to be no other available source of data on the use of ECT in Ontario psychiatric facilities, the Committee developed its own questionnaire to obtain statistical information. A copy of the questionnaire is appended to this Report as part of Schedule "B". The Committee recognized that the data furnished by respondents might be no more reliable or complete than those which were available through HMRI. However, in light of the very limited data it had before it, and the directions set out in the terms of reference, the Committee felt compelled to send out the questionnaire. While the Committee recognized at the outset that it was imposing a difficult and onerous task on the hospitals, it was only later that it became evident that the detailed information requested in the questionnaire was virtually unobtainable.

It should be noted that, while the Committee initially considered conducting its field survey by having a resource person visit each of the facilities, the lack of resources for such a process rendered that course of action impossible. In hindsight, such a process would only have ensured that the limited information available would have been obtained in a consistent manner from every psychiatric facility in the province.

The questionnaire eliciting data on the use of ECT was sent to 86 facilities in the province, of which 35 responded. It soon became apparent that the data requested were not easily obtainable. Several facilities indicated that out-patient records were not available, and some had difficulty identifying the medical records of those patients who had received ECT. The medical records themselves posed

numerous problems. Often the diagnosis and reason for treatment were recorded descriptively, not according to a known diagnostic classification system, and therefore were not clearly identifiable in the record. Similarly, it was often unclear whether the patient had received previous ECT, pharmacotherapy or psychotherapy. In addition, it would appear that the number of attempted seizures, as opposed to the number of actual seizures, is not always recorded. (On occasion, an attempt to induce a convulsion is unsuccessful. The patient is anaesthetized, the electrodes are applied and the electrical stimulus is delivered, but the seizure does not occur.)

The problem of inadequate record-keeping with respect to ECT became very apparent from questionnaire responses, as well as from professional submissions sent to the Committee. One submission, in particular, stands out. The Mississauga Hospital Quality of Care Committee undertook a retrospective review of ECT in that facility¹ and shared its findings with the Committee.

In assessing whether there was a history of prior treatment which indicated that ECT should be used, or a clinical situation predicating ECT as a first choice treatment, the authors of the Mississauga Hospital Report stated that:

From the chart review, it became clear that the clinical thinking leading to the decision to prescribe ECT was not being spelled out in detail in the clinical record.

They concluded that:

...Both urgency and treatment history were factors in making a decision to prescribe ECT, but present methods of recording did not allow more definitive conclusions at this time....

In attempting to assess the rate of success of ECT, and how it was defined, the Mississauga Hospital review encountered great difficulties:

Although most of the discharge notes contained a comment about whether the patient improved with ECT, the comments were no more specific than simply that "The patient improved on ECT." Since their "target symptoms" were not listed prior to using ECT, or rated during the course of ECT, it is impossible to know how the progress of these symptoms related to the use of ECT.

Another problem is that the patient charts do not contain a follow-up record of the patient's progress post-discharge; the hospital has no mandate to do so.

In assessing the side effects of ECT, the review found:

...Once again, the primary difficulty is that side effects are not recorded consistently in a specific place in a chart for easy access.

The Mississauga Hospital Report concluded:

...A major deficit became quite apparent in the area of recording information. The major recommendation from the study, therefore, is that additional "standardized" information be recorded in an appropriate manner as a part of the treatment record...

It is of interest to note that several states in the United States have firm specifications regarding record keeping. As pointed out in the chapter of this Report entitled Legislation, the State of California² requires the medical chart to include reasons for recommending ECT, as well as a statement that all reasonable alternatives have been considered and that ECT is definitely indicated and is the "least drastic alternative."

The State of Colorado goes further; it requires semi-annual reports of ECT use to be submitted by each institution to the State Department of Health. The reports are to include patient status, sex, age, ethnicity, diagnosis, number of treatments, consent and complications. Patient identity, however, is not to be disclosed, directly or indirectly.³

The position paper on ECT submitted to the Committee by the Ontario Medical Association and the Ontario Psychiatric Association calls for systematic collection of data on ECT in Ontario:

There is a pressing need to develop a system for the collection of descriptive statistical data on the use of ECT throughout Ontario. This information is essential, not just to monitor practice patterns but also to facilitate clinical research with the objective of providing better treatment.

COMMENT

Based on the data summarized in the table presented earlier in this chapter, there has been a downward trend in the total number of ECT procedures in Ontario over the six-year period from 1978-79 to 1983-84. This trend in the use of ECT may be due to a number of factors, including the increased use of alternative treatments, particularly as new and improved drugs have been developed.

The lack of province-wide information as to the legal status, age, sex and diagnosis of patients receiving ECT, and the number of such treatments per patient per admission, has effectively prevented the Committee from making a reliable analysis of the patterns of ECT use in Ontario.

Allegations were made to the Committee that ECT has been used inappropriately in some cases. With present data-keeping practices it would be difficult to properly evaluate such claims.

The Committee recommends that, within each psychiatric facility in which ECT is administered, standardized information regarding ECT be recorded by the physician in a specific place in the patient's medical record, so as to be easily identifiable and accessible. The information should include, but not necessarily be limited to: the indications for ECT; diagnosis according to a standard diagnostic system; history including previous ECT; number of treatments; outcome; side effects; competency to consent to treatment; nature of the authority for the procedure; stimulus, dose, electrode placement; and patient legal status, sex and age. This standardized information on ECT in the clinical record would permit more effective auditing of the procedure within the hospital and would help to ensure that ECT is being used appropriately. The availability of such data would also greatly facilitate future research projects into the use of ECT.

The Committee further recommends that a mandatory reporting system be established by the Ministry of Health to collect data on the use of ECT in Ontario. Monitoring ECT on a province-wide basis may help in identifying any unusual or unacceptable practice, which could then be dealt with appropriately. Furthermore, such a mandatory reporting system would create an invaluable resource for research into ECT, as it would be difficult for any one physician or hospital to otherwise amass sufficient data to draw worthwhile scientific conclusions. These data should be published annually and made available to the public.

Legislation

The Committee reviewed relevant Ontario and Federal legislation as well as legislation from the other Canadian provinces, Great Britain and the United States. The most relevant provisions of the Ontario and Federal legislation for the purposes of this review are set out in Schedules "I", "J", and "K" appended to the Report. Comments appear below.

A. ONTARIO LEGISLATION

I. ADMINISTERED BY THE MINISTRY OF HEALTH

MENTAL HEALTH ACT

R.S.O. 1980, c.262, as amended by 1981, c.66, Schedule; 1983, c.75; and 1984, c.11, s.194.

Every psychiatric facility so designated by the regulations promulgated thereunder is subject to the provisions of the Mental Health Act and regulations. The term psychiatric facility includes psychiatric units of public hospitals, as well as government-operated and other psychiatric hospitals.

You will note that the Mental Health Act does not deal specifically with ECT. The only treatment which is dealt with separately within the Mental Health Act is psychosurgery. In the 1983 Supreme Court of Ontario decision of Re T and Board of Review for the Western Region et al.,¹ a copy of which is appended to this Report as Schedule "A", the definition of psychosurgery was held to exclude electro-convulsive therapy. Therefore, ECT must be considered to be included in the general term "treatment."

The term "mentally competent" is defined in Section 1(g) of the Mental Health Act in terms of a patient's capacity to give consent. It is a common misconception, even amongst hospital medical staff and personnel, that an involuntary patient, 'by definition', does not have the capacity to consent to or refuse treatment. This is not the case. Nothing in the legislation stipulates that involuntary commitment is related to the absence of patient capacity to consent. The legislative criteria for involuntary hospitalization in Ontario are that the individual is suffering from mental disorder of a nature or quality that likely will result in serious bodily harm to that person or to another person, or result in imminent and serious physical impairment of the person, unless he or she remains in the custody of a psychiatric facility; and the person is not suitable for admission as an informal patient. It is clear from the criteria that an individual may be involuntarily committed but still possess the capacity to consent to treatment.

The Act also clearly states in section 35(2) that consent to psychiatric treatment must be obtained from the patient. The only exceptions apply where the patient has not reached the age of majority or is not mentally competent (within the meaning of 1(g) of the Mental Health Act) to consent to treatment. In these situations, it is necessary to seek authority to treat from the nearest relative of the patient.² If there is no nearest relative available, the physician can make an application (under section 35(4) (a) of the Act) to the Review Board (as established under section 30(1)) for authorization to perform the treatment. The Review Board also has the authority to override the refusal of treatment by an involuntary patient who is competent, or refusal by the nearest relative of an involuntary patient who is incompetent to consent to treatment.³ In other words, for involuntary patients there is not an absolute right to refuse treatment.

Apart from the definition of "mentally competent", the legislation is silent on the whole question of determination of competency for making treatment decisions. However, in practice, the attending physician makes the determination. There is no process or guidelines set out for the determination of competence to consent to or refuse treatment, and the physician's decision is not appealable.

In contrast, a formal process is provided in the Act for the attending physician to determine whether or not a patient is competent to manage his estate, including written reasons therefor which must be entered in the clinical record. Moreover, the decision is appealable to the Review Board under Section 33f of the Act.

Some of the provisions in the current legislation are discussed in greater detail in other chapters of this Report.

PUBLIC HOSPITALS ACT

R.S.O. 1980, c.410, as amended by 1981, c.25.

This statute governs the operation of all public hospitals and, therefore, of all psychiatric units in public hospitals.

MENTAL HOSPITALS ACT

R.S.O. 1980, c.263.

This Act governs the ten provincial psychiatric hospitals (designated by regulation under the Act) which are directly administered by the Ministry of Health.

HEALTH DISCIPLINES ACT

R.S.O. 1980, c.196, as amended by 1983, c.59.

This statute is applicable to five self-regulating health disciplines in Ontario, which include Medicine and Nursing.

Pursuant to the Health Disciplines Act, the Minister of Health has a general duty to ensure that the activities of health disciplines are effectively regulated and co-ordinated in the public interest, to have appropriate standards of practice developed and to ensure that these standards are maintained.

The legislation sets out the specific duties of the College of Physicians and Surgeons of Ontario. The objects of the College include the regulation of the practice of medicine, the governing of the College's members, the establishment, maintenance and development of standards of knowledge, skill, qualification and practice and the establishment, maintenance and development of standards of professional ethics among its members.

The legislation sets out comparable duties for the College of Nurses of Ontario with regard to the nursing.

The legislation requires the establishment of a Complaints Committee to consider and investigate complaints made by members of the public or members of the College regarding the conduct or actions of any member of the College, as well as the establishment of a Discipline Committee to hear and determine allegations of professional misconduct or incompetence against any member.

The Council has established a Committee on Peer Assessment to establish, administer and develop a peer assessment program for the assessment of the standards of practice of members in the care of patients and in the maintenance of records in the care of patients.

It is important to note that, in addition to the powers and duties as set out in Part I of the legislation, the Minister of Health may review the activities of the Council, request the Council to undertake activities that, in the opinion of the Minister, are necessary and advisable, and advise the Council with respect to the implementation of the legislation and the methods used or proposed to be used by the Council to implement policies and enforce regulations and procedures. Regulations made by the Council that do not relate to the administrative and domestic affairs of the College must be reviewed by the Minister. These include regulations governing standards of practice for the profession.

General Comment on Ministry of Health Legislation

The administration of the ten provincial psychiatric hospitals is the responsibility of the Minister of Health; the administration of public hospitals is the responsibility of the Board of Directors of each institution. One psychiatric hospital which is not governed by either of these Acts is Homewood Sanitarium, which is governed by the Private Sanitaria Act. The Committee considers it highly desirable that any new legislation or regulations arising out of the recommendations of this Report be made applicable to all psychiatric facilities which administer ECT.

II. ADMINISTERED BY OTHER MINISTRIES

MENTAL INCOMPETENCY ACT

R.S.O. 1980, c.264, as amended by 1984, c.11, s.195.

This statute is under the jurisdiction of Ministry of the Attorney General. A mentally incompetent person is defined in the statute and a judicial process is provided for a declaration that a person is mentally incompetent and for the appointment of a committee of the person or of the estate of the person or of both.

This legislation gives custody of a mentally incompetent person and/or the responsibility for management of the estate of such person to a committee (a person who has responsibility for the care of such mentally incompetent person and the estate of such person). The jurisdiction of the court to make a declaration of incompetency and the appointment of a committee is subject, however, to the Mental Health Act. Under the Mental Health Act, notwithstanding that a person other than the Public Trustee has been appointed committee of the estate of a patient or out-patient, the Supreme Court may, at any time upon the application of the Public Trustee, appoint him as committee in the place of that person. On the other hand, if at any time a committee of the estate of a patient or out-patient is appointed under the Mental Incompetency Act, the Public Trustee ceases to be committee.

It should be noted that the provisions of the Mental Health Act, pursuant to which the Public Trustee becomes committee of the estate of a patient or out-patient, either after an examination by a physician and the issuance of a certificate of incompetence or on voluntary appointment by a patient or out-patient, do not apply to a patient or out-patient whose estate is under committeehip under the Mental Incompetency Act.

It should also be noted that a committee of the person appointed under the Mental Incompetency Act may have authority to make a treatment decision.

STATUTORY POWERS PROCEDURE ACT

R.S.O. 1980, c.484.

This statute is under the jurisdiction of the Ministry of the Attorney General. Part I thereof applies to tribunals in the exercise of a statutory power of decision conferred by or under an Act of the Legislature, where the tribunal is required by or under such Act or otherwise by law to hold or to afford to the parties to the proceedings an opportunity for a hearing before making a decision.

The procedural protections provided in this Act are applicable to hearings such as those conducted by the Regional Review Boards under the Mental Health Act, for example, hearings to confirm or revoke commitment certificates or to grant or deny treatment orders.

CHILD AND FAMILY SERVICES ACT, 1984

This statute is within the jurisdiction of the Ontario Ministry of Community and Social Services, and as such is not generally applicable to general hospitals and provincial psychiatric hospitals, unless these facilities are providing services to an "approved agency" on a purchase of service basis, are receiving a grant or contribution for the provision of services, or fall within the definition of "approved agency."

This statute provides for the establishment of interdisciplinary review teams to review, then approve or refuse, the proposed use of intrusive procedures. The review team may not approve the use of an intrusive procedure unless the child, if sixteen years of age or more, consents or, if the child is less than sixteen years of age, the child's parent consents or, if the child is in a society's lawful custody, the society consents. In the case of a child who is less than sixteen years of age, the child's views and preferences must be considered where they can be reasonably ascertained. Other prerequisites to a review team's approval are that at least one less intrusive alternative has been attempted without success, that there is no other practicable and less intrusive alternative, and that there are reasonable grounds to believe that the procedure will improve the child's behaviour.

The statute makes specific provisions with respect to ECT. Where ECT is recommended, three members of the review team, including one physician, must review the matter and advise the child's parent or (when the child is in a society's lawful custody) the society, as well as the service provider, of the review team's opinion as to the appropriateness of the recommendation. In addition, ECT is prohibited from being performed in premises falling under the jurisdiction of this statute.

B. FEDERAL LEGISLATION

CONSTITUTION ACT, 1982, PART I:

CANADIAN CHARTER OF RIGHTS AND FREEDOMS

The rights and freedoms set out in the Charter are guaranteed by the Constitution and there exists the power to appeal to the courts if these constitutional rights have been infringed upon or denied. All provincial legislation is subject to the provisions of the Charter. The relevant sections are set out as Schedule "K" of this Report.

The Charter strongly reinforces an individual's right to autonomy and right to self-determination. These rights can only be limited insofar as such limitation can be "demonstrably justified in a free and democratic society." The Charter may have significant implications for the psychiatric patient.

Section 7 of the Charter protects the right to liberty and security of the person and requires that any deprivation of these rights must be done in accordance with principles of fundamental justice. It could be argued that this section applies to the involuntary commitment of a patient unless an opportunity has been given to defend against the process, rebut evidence and present evidence. Numerous procedural protections of this kind came into force in Ontario in 1984 through amendments to the Ontario Mental Health Act.⁴ As well as the provisions in the Mental Health Act itself, there are further procedural protections by applicability of the Statutory Powers Procedure Act. Section 7 of the Charter might also be invoked to question the process of determining a patient to be incompetent to authorize treatments and the process of authorizing non-consensual treatment.

With regard to the determination of incompetency to consent to treatment, Ontario legislation affords no procedural protections. Procedural protections are in place for compulsory treatment hearings; however, some argue that compulsory treatment offends the Charter in any case.

Section 10 of the Charter protects the right of a person to retain and instruct counsel without delay and to be informed of that right. There should be no doubt that this section is applicable to involuntarily hospitalized patients. The Ontario Government has recently taken steps to ensure that such patients are informed of their rights and are assisted in obtaining legal services.

Section 12 of the Charter protects against "any cruel and unusual treatment." While it is too early to say with any certainty what the legal interpretation of section 12 may be eventually, this section may provide protection to psychiatric patients from any unusual or experimental therapy or therapy involving a serious risk to health or life.

Section 15 of the Charter provides for the equal protection and benefit of the law for all individuals regardless of mental disability. The Ontario Government has proposed legislation (Bill 7)⁵ to amend certain statutes to conform to Section 15 of the Charter. Some argue that Section 15 could be invoked to protect against differential treatment of informal and involuntary psychiatric patients. The proposed amendments to the Mental Health Act in Bill 7 are considered in the chapter of this Report entitled Consent.

C. OTHER PROVINCIAL MENTAL HEALTH LEGISLATION IN CANADA

Within Canada, every province but one has separate legislation for mental health. The exception is the province of Nova Scotia which does not have a separate mental health statute but relevant provisions are contained within that province's Hospitals Act. Similarly, both the Yukon Territory and the Northwest Territories have Mental Health Ordinances.

The Committee has reviewed the following legislation:

Alberta	<u>Dependent Adults Act</u> , R.S.A. 1980, c.D-32 <u>Health Facilities Review Committee Act</u> , R.S.A. 1980, c.H-4 <u>Mental Health Act</u> , R.S.A. 1980, c.M-13
British Columbia	<u>Mental Health Act</u> , R.S.B.C. 1979, c. 256
Manitoba	<u>Mental Health Act</u> , R.S.M. 1970, c.M110
New Brunswick	<u>Mental Health Act</u> , R.S.N.B. 1973, c.M-10
Newfoundland	<u>The Mental Health Act</u> , 1971, S. Nfld. 1971, No. 80
Northwest Territories	<u>Mental Health Ordinance</u> , R.O.N.W.T. 1974, c.M-11
Nova Scotia	<u>Hospitals Act</u> , R.S.N.S. 1967, c.249
Prince Edward Island	<u>Mental Health Act</u> , R.S.P.E.I. 1980, c.M-9
Quebec	<u>Mental Patients Protection Act</u> , R.S.Q. 1977, c.P-41
Saskatchewan	<u>Mental Health Act</u> , R.S.S. 1978, c.M-13
Yukon	<u>Mental Health Ordinance</u> , C.O.Y.T. 1976, c.M-7

None of the provincial mental health legislation deals specifically with ECT. The word "treatment" is consistently used as an all-inclusive term without breakdown into the various possible treatments and therapies. The only treatment which is dealt with separately within the provincial mental health legislation is psychosurgery. However, this distinction is only made in the Ontario Mental Health Act⁶ and the Nova Scotia Hospitals Act,⁷ and only Ontario actually defines psychosurgery. None of the Canadian provincial statutes refers specifically to the use of electro-convulsive therapy. Therefore, ECT must be considered to be included in the general term "treatment." In Saskatchewan, psychosurgery is defined in the Mental Health Services Act, 1985,⁸ which was passed recently (but not yet proclaimed and therefore not in force). The pending legislation vests regulatory power in the Lieutenant Governor in Council to designate special treatments which are not to be administered to involuntary patients except in accordance with certain procedures, and to prescribe what those procedures must be.

In Canada, only Nova Scotia has legislatively dealt with the issue of who should determine a patient's competence to consent to or refuse treatment.⁹ In that province, it is the psychiatrist alone who makes this decision, which is reviewable by a review board or county court.

With respect to the right of a psychiatric patient to refuse treatment, there appear to be four basic approaches to this issue in the provincial mental health legislation. One approach explicitly provides for detention and treatment without consent of a psychiatric patient who is hospitalized in the interest of his own safety, safety of others and security of property. Another approach implicitly denies an involuntary psychiatric patient the right to refuse treatment, usually by explicitly recognizing this right for informal patients only. A third approach explicitly recognizes the right of a hospitalized psychiatric patient, whether informal or involuntary, to refuse treatment. This is usually qualified by a requirement that the patient be mentally competent to authorize treatment. A fourth approach is not to address the issue either directly or indirectly.

D. BRITISH LEGISLATION

The British Mental Health Act, 1983¹⁰ allows for non-consensual medical treatment of patients detained under the Act. A patient may be admitted to and detained in hospital for medical treatment on the grounds that:

- (a) he is suffering from mental illness, severe mental impairment, psychopathic disorder or mental impairment and his mental disorder is of a nature or degree which makes it appropriate for him to receive medical treatment in hospital; and
- (b) in the case of psychopathic disorder or mental impairment, such treatment is likely to alleviate or prevent a deterioration of his condition; and
- (c) it is necessary for the health or safety of the patient or for the protection of other persons that he should receive such treatment and it cannot be provided unless he is detained under (the section of the Act dealing with detention).

A patient so detained can be given ECT without his consent, but unless there is an emergency, an independent doctor must certify that, having regard to the likelihood of its alleviating or preventing a deterioration of his or her condition, the treatment should be given. Before certifying, the independent doctor must consult two other persons who have been professionally involved with the patient's medical treatment, and of those persons one shall be a nurse and the other shall be neither a nurse nor a registered medical practitioner. In an emergency

(immediately necessary to save the patient's life), a patient can be given ECT without consent and without the foregoing certification process.

In the area of proxy consent, the British Mental Health Act provides a much more detailed model of the "nearest relative" concept than the current Ontario Mental Health Act.

E. UNITED STATES LEGISLATION

The Committee reviewed available mental health legislation from the American states set out hereunder:

Alabama	Iowa	Nebraska	Rhode Island
Alaska	Kansas	Nevada	South Carolina
Arkansas	Kentucky	New Hampshire	South Dakota
California	Louisiana	New Jersey	Tennessee
Colorado	Maine	New Mexico	Texas
Delaware	Maryland	New York	Utah
Florida	Massachusetts	North Carolina	Vermont
Georgia	Michigan	North Dakota	Virginia
Hawaii	Minnesota	Ohio	Washington
Idaho	Mississippi	Oklahoma	Wisconsin
Illinois	Missouri	Oregon	
Indiana	Montana	Pennsylvania	

The Committee was able to obtain current legislative materials for fifteen of the states. Legislative material current to 1982 was available for most of the remaining states. It is possible that in the intervening time period new legislation may have been passed on any given issue. Regulations promulgated under these statutes were not available and may control specific aspects of the administration of ECT such as specifying limits as to the frequency and duration of its use. With these qualifications, the Committee would like to draw attention to some provisions in the American legislation which specifically regulate the use of ECT.

California

The California legislation is by far the most detailed of any state legislation dealing with ECT.¹¹ California requires that the patient be given extensive information before consenting to treatment. This must include:

- (a) The reason for treatment, that is, the nature and seriousness of the patient's illness, disorder or defect.

- (b) The nature of the procedures to be used in the proposed treatment, including its probable frequency and duration.
- (c) The probable degree and duration (temporary or permanent) of improvement or remission, expected with or without such treatment.
- (d) The nature, degree, duration, and the probability of the side effects and significant risks, commonly known by the medical profession, of such treatment, including its adjuvants, especially noting the degree and duration of memory loss (including its irreversibility) and how and to what extent they may be controlled, if at all.
- (e) That there exists a division of opinion as to the efficacy of the proposed treatment, why and how it works and its commonly known risks and side effects.
- (f) The reasonable alternative treatments, and why the physician is recommending this particular treatment.
- (g) That the patient has the right to accept or refuse the proposed treatment, and that if he or she consents, has the right to revoke his or her consent¹² for any reason, at any time prior to or between treatments.

In California, the patient must give "written informed consent" to convulsive treatment. Written informed consent is defined as follows:

- (a) For purposes of this chapter, "written informed consent" means that a person knowingly and intelligently, without duress or coercion, clearly and explicitly manifests consent to the proposed therapy to the treating physician and in writing on the standard consent form prescribed in Section 5326.4.
- (b) The physician may urge the proposed treatment as the best one, but may not use, in an effort to gain consent, any reward or threat, express or implied, nor any other form of inducement or coercion, including, but not limited to, placing the patient in a more restricted setting, transfer of the patient to another facility, or loss of the patient's hospital privileges. Nothing in this subdivision shall be construed as in conflict with Section 5326.2. No one shall be denied any benefits for refusing treatment.
- (c) A person confined shall be deemed incapable of written informed consent if such person cannot understand, or knowingly and intelligently act upon, the information specified in Section 5326.2.
- (d) A person confined shall not be deemed incapable of refusal solely by virtue of being diagnosed as a mentally ill, disordered, abnormal or mentally defective person.
- (e) Written informed consent shall be given only after 24 hours have elapsed from the time the information in Section 5326.2 has been given.¹³

Section 5326.7 states that a maximum number of treatments must be specified on the consent and that this consent is valid over a specified maximum period of time not to exceed thirty days. The "withdrawal of consent may be either oral or written and shall be given effect immediately." ¹⁴

California and several other states have specific requirements regarding the keeping of records. For example, California requires the medical chart to include the reasons for recommending ECT, a statement that all reasonable treatment modalities were carefully considered, that the treatment was definitely indicated and that ECT was the "least drastic alternative" at that time. This statement must be signed by the attending and treating physician(s). ¹⁵

The California Code also addresses the issue of a patient's capacity to give a written informed consent:

If either the attending physician or the attorney believes that the patient does not have the capacity to give a written informed consent, then a petition shall be filed in Superior Court to determine the patient's capacity to give written informed consent....

If the Court determines that patient does not have the capacity to consent, then treatment may be performed upon gaining substitute consent. ¹⁶

If a patient is deemed able to give informed consent and refuses to do so, then no convulsive treatment is to be performed. ¹⁷ The physician must indicate in the treatment record that the treatment was refused despite the physician's advice and that he has explained to the patient the patient's responsibility for any untoward consequences of his refusal.

In California, convulsive treatment cannot be performed on a minor under the age of twelve years. ¹⁸ For persons twelve to fifteen years of age, convulsive treatment can be administered: ¹⁹

- (a) if it is an emergency situation and such treatment is deemed to be lifesaving, and
- (b) the need for and appropriateness of the treatment are unanimously certified to by a review board of three board-eligible or board-certified child psychiatrists, and
- (c) it is thoroughly documented and reported immediately to the Director of Mental Health.

Persons 16 and 17 years of age have the rights established for adults.

Colorado

Colorado requires detailed statistical reporting of ECT.²⁰ Reports of ECT use must be sent in semi-annually to the State Department of Health. This report categorizes the use of ECT on the basis of patient status, sex, age, ethnicity, diagnosis, number of treatments, consent and complications.²¹

Colorado, like California, has requirements as to what information should be given to a patient when ECT is proposed.²²

New Jersey

Under the New Jersey Revised Code, patients have the absolute right not to be subjected to ECT without "expressed and informed consent... after consultation with counsel or interested party of the patient's choice."²³ If the patient has been adjudicated incompetent, a court of competent jurisdiction must hold a hearing to determine the necessity of ECT, and specified procedural safeguards apply:

... (The patient) is physically present, represented by counsel, and provided the right and opportunity to be confronted with and to cross-examine all witnesses alleging the necessity of such procedures. In the event that a patient cannot afford counsel, the court shall appoint an attorney not less than 10 days before the hearing. An attorney so appointed shall be entitled to a reasonable fee to be determined by the court and paid by the county from which the patient was admitted. Under no circumstances may a patient in treatment be subjected to experimental research which is not directly related to the specific goals of his treatment program.²⁴

Thus, the patient is either competent and by definition able to consent to or refuse ECT; or the patient is incompetent, in which instance the court decides.

Oregon

In Oregon ECT cannot be administered unless express and informed consent has been given:

Mentally ill persons committed to the division shall have the right to be free from potentially unusual or hazardous treatment procedures including...electro shock therapy, unless they have given their express and informed consent.²⁵

In the case of persons who are either dangerous to themselves or dangerous to others, the right to refuse ECT may be denied "for good cause" by the director of the facility or his designee "after consultation with and approval of an independent examining physician."²⁶

Texas

Texas has legislated certain medical procedures for the administration of ECT, requiring a physical and neurological examination within one week of treatment, mandatory anaesthesia, and the presence of a psychiatrist, anaesthesiologist and two trained assistants.²⁷

Washington

In the State of Washington, involuntarily detained persons have the right "not to consent to the performance of shock treatment."²⁸ In Washington the right not to consent is limited "insofar as danger to the individual or other is not created"²⁹ or "unless ordered by a court pursuant to a judicial hearing in which the person is present and represented by counsel."³⁰

General Comment on United States Legislation

It appears that at least 32 states have passed laws regulating the use of ECT. In the absence of either statutes or regulations in Canada which address ECT specifically (except for the Ontario Child and Family Services Act, 1984), it is helpful to look to the United States legislation. The American legislation is further considered in the chapter of this Report entitled Data and Record Keeping and in the chapter on Consent.

Consent

An essential element of any medical treatment is consent. The necessity for consent to treatment arises out of the recognized right to autonomy — the right of individuals to be the master of their own fate. At law, any medical treatment without consent constitutes a battery. An exception to this rule is the 'emergency exception', where a doctor is unable to obtain consent or refusal by the patient (for example, because of unconsciousness) and in a situation where, if there is no treatment, the patient is in danger of death or serious and permanent physical harm. Another exception to the rule arises where statutory authority permits medical treatment without consent.

A consideration of the concept of consent from a mental health perspective reveals many concerns. What information should be given to the patient? How does one deal with the person who lacks the capacity to consent? Are involuntarily committed patients denied certain basic rights? Is a psychiatric facility an 'inherently coercive environment'? Who should make the determination of whether or not a person has the necessary capacity to consent? If the person lacks this capacity, should someone else be authorized to make this decision? If so, who should have this authority? Should ECT ever be used for restraint or in an emergency?

In making its recommendations, the Committee has considered the implications of the Canadian Charter of Rights and Freedoms, as arguments can be made pursuant to the Charter with respect to issues such as procedural fairness, security of the person and equality of treatment of involuntary and informal patients. These issues are discussed in this chapter and in the chapter on Legislation.

Among the issues encountered by the Committee the question of valid consent to treatment looms large in importance and complexity. To be valid, a consent must meet three criteria: the consent must be informed, the consent must be

voluntary, and the consent must be provided by a competent patient or a legally authorized proxy.

While some of the discussion relating to consent to treatment may be applicable to treatment in a general sense, the Committee has directed its consideration to ECT in particular. However, in some matters, there is no logical reason for making different provisions for ECT than for other forms of treatment in a psychiatric facility and, in those matters, the Committee has made recommendations which have broader application.

The recommendations of the Committee apply to all patients in psychiatric facilities whether they are involuntarily hospitalized or admitted as informal (voluntary) patients.

A. INFORMED CONSENT

One of the most important concepts underlying the entire field of health law is that of informed consent. Informed consent suggests that a patient has consented to treatment after being informed of the attendant risks and benefits associated with the medical treatment or diagnostic procedure. The Supreme Court of Canada dealt with the standard of care expected of a physician and the duty to disclose the risks and benefits of treatment in Reibl v. Hughes¹ and Hopp v. Lepp.²

In Hopp v. Lepp the scope of the physician's duty to disclose risks and material facts to the patient was outlined by then Chief Justice Bora Laskin relying on the decision in Kenny v. Lockwood.³ In Hopp v. Lepp, it was determined that if a surgeon recommends an operation which involves probable serious, special or unusual risks, then the surgeon is under an obligation to disclose those risks. In the absence of such disclosure, it will be decided that, while the patient may have consented to the treatment or procedure, the consent given was not 'informed'. Chief Justice Laskin stated,

Apart from situations of this kind, a surgeon need not go into every conceivable detail of a proposed operation so long as he describes its nature, unless the patient asks specific questions not by way of merely general inquiry, and, if so, those questions must be answered, although they invite answers to merely possible risks. If no specific questions are put as to possible risks, the surgeon is under no

obligation (although he may do so) to tell the patient that there are possible risks since there are such risks in any operation.⁴

The physician is still left with the need to distinguish between those risks which are probable or unusual and those which are merely possible. How is the physician to make this decision? Should the decision be based on the average patient or should the physician take into consideration any special information which he or she might have regarding this specific patient? While Hopp v. Lepp⁵ did not resolve this point, Chief Justice Laskin clarified this in a later decision, Reibl v. Hughes.⁶ In this latter case the Supreme Court of Canada adopted a standard which objectively assesses the patient's particular circumstances:

The adoption of an objective standard does not mean that the issue of causation is completely in the hands of the surgeon. Merely because medical evidence establishes the reasonableness of a recommended operation does not mean that a reasonable person in the patient's position would necessarily agree to it, if proper disclosure had been made of the risks attendant upon it, balanced by those against it. The patient's particular situation and the degree to which the risks of surgery or no surgery are balanced would reduce the force, on an objective appraisal, of the surgeon's recommendation.⁷

Chief Justice Laskin qualified this rule:

In saying that the test is based on the decision that a reasonable person in the patient's position would have made, I should make it clear that the patient's particular concerns must also be reasonably based; otherwise, there would be more subjectivity than would be warranted under an objective test.... In short, although account must be taken of a patient's particular position, a position which will vary with the patient, it must be objectively assessed in terms of reasonableness.⁸

In summary, Canadian case law requires that prior to proceeding with the recommended course of treatment the physician must receive authorization from the patient. This authorization, informed consent, is obtained after the physician has disclosed to the patient those risks, benefits and alternatives which the average person in that patient's situation would find relevant to a decision to agree to treatment or to refuse treatment and the physician must also answer any specific questions posed by the patient.

In the United States, some jurisdictions have deemed it advisable to set out in legislation what information must be imparted to a patient contemplating

treatment with ECT in particular. For example, California has legislated that the following information must be provided to patients to whom ECT is being recommended:

- (a) The reason for treatment, that is, the nature and seriousness of the patient's illness, disorder or defect.
- (b) The nature of the procedures to be used in the proposed treatment, including its probable frequency and duration.
- (c) The probable degree and duration (temporary or permanent) of improvement or remission, expected with or without such treatment.
- (d) The nature, degree, duration, and the probability of the side effects and significant risks, commonly known by the medical profession, of such treatment, including its adjuvants, especially noting the degree and duration of memory loss (including its irreversibility) and how and to what extent they may be controlled, if at all.
- (e) That there exists a division of opinion as to the efficacy of the proposed treatment, why and how it works and its commonly known risks and side effects.
- (f) The reasonable alternative treatments, and why the physician is recommending this particular treatment.
- (g) That the patient has the right to accept or refuse the proposed treatment, and that if he or she consents, has the right to revoke his or her consent for any reason, at any time prior to or between treatments.⁹

The State of Colorado provides for similar information to be given to a patient contemplating treatment with ECT:

- (a) The reason for treatment;
- (b) The nature of the procedures to be used in such treatment, including its probable frequency and duration;
- (c) The probable degree and duration of improvement or remission expected with and without treatment;
- (d) The nature, degree, and probability of the side effects and significant risks commonly known by the medical profession, especially noting the possible degree and duration of memory loss, the possibility of permanent irrevocable memory loss, and the remote possibility of death;
- (e) The reasonable alternative treatments and why the physician is recommending electroconvulsive treatment.

- (f) That the patient has the right to refuse or accept the proposed treatment, and has the right to revoke his consent for any reason at any time, either orally or in writing.
- (g) That there is a difference of opinion within the medical profession on the use of electroconvulsive treatment.¹⁰

It is noteworthy that the American Psychiatric Association (APA) 1978 Task Force Report on Electro-convulsive Therapy recommended that patients being asked to consent to treatment with ECT be informed of:

- (a) The nature and seriousness of the disorder.
- (b) The probable course that is likely with and without ECT (without providing guarantees);
- (c) A description of the procedure.
- (d) The nature, degree, duration, and probability of significant risks and/or adverse effects. Special attention should be paid to post-treatment confusion and memory dysfunction;
- (e) A description of reasonable alternatives, and why ECT is being recommended.
- (f) The right of the patient to accept or refuse ECT, the right to revoke his/her consent at any time, and acknowledgement that the consent is for a specified minimum period of time. Additional treatments shall require a renewed written informed consent.
- (g) The cost of the proposed treatment.¹¹

The APA further recommended that there be an entry into the medical record indicating that all of the above information was provided and that the person giving consent was competent to understand and act on this information.

The 1985 National Institutes of Health (NIH) Consensus Development Conference Statement¹² not only dealt with the information to be provided to a patient prior to consenting to ECT, but also emphasized that consent to treatment involves an "ongoing consultative process."

...In this (ongoing consultative) process, the physician must make clear to the patient the nature of the options available and the fact that the patient is entitled to choose among those options.

No uniform "shopping list" can be drawn up regarding the matters that should be discussed by patient and physician to assure a fully

informed consent. They should discuss the character of the procedure, its possible risks and benefits (including full acknowledgment of post-treatment confusion, memory dysfunction, and other attendant uncertainties), and the alternative treatment options (including the option of no treatment at all). Special individual needs may also be relevant to some patients.... In all matters, the patient should not be inundated with technical detail; the technical issues should be translated into terms meaningful and accessible to the patient.

It is not easy to achieve this ideal of "informed consent" in any aspect of medical practice; and there are special difficulties that arise regarding the administration of ECT. In particular, the patients for whom this procedure is medically appropriate may be suffering from a severe psychiatric illness that, although not impairing their legal competency to consent, may nonetheless cloud judgment in fully weighing all of the available options. Such judgmental distortion does not justify disregarding the patient's choices; rather it makes it all the more important that the physician strive to identify and clarify the options that the patient alone is entitled to exercise.

The consent given by the patient at the outset of treatment should not be the final exchange on this issue but should be reexamined with the patient repeatedly throughout the course of the treatment. These periodic reviews should be initiated by the physician and not depend on patient initiative to "rescind" consent.

There are several reasons for this repeated consenting procedure: Because of the relatively rapid therapeutic effect of the procedure itself, the patient after initial treatments is likely to have enhanced judgmental capacities; the risks of adverse effects increase with repeated treatments, so that the question of continued treatment presents a possibly changed risk/benefit assessment for the patient; and because of the short-term memory deficits that accompany each administration of ECT, the patient's recollection of the prior consenting transaction might itself be impaired, so that repeated consultations reiterating the patient's treatment options are important to protect the patient's sense of autonomy throughout the treatment process. Moreover, if the patient agrees, the family should be involved in each step of this consultative process.

The Committee examined samples of consent forms used in facilities throughout Ontario. The consent form serves as evidence that the process of obtaining consent has been followed. Although several facilities use a consent form specific to ECT, many use a general consent form. However, even the ECT-specific consent forms which were made available to the Committee provided minimal, if any, information and were technical in wording. In several instances the only difference between a general consent form and the ECT-specific consent form was that "Electro-Convulsive Therapy" was part of the printing of the form instead of being handwritten.

Comment on Informed Consent

One of the crucial questions that the Committee examined in the area of informed consent is the question of what information should be given to the patient in order to ensure understanding.

A detailed analysis of the submissions received from members of the public indicates a striking positive correlation among the following: the amount of information received, the sense of participation in the decision making process, and the patient's positive views of the treatment. This finding supports the Committee's belief that all efforts must be made to preserve an individual's right to autonomy and that the importance of providing the patient with sufficient information cannot be overemphasized.

The Committee agrees with many of the conclusions regarding informed consent set out in the 1985 Consensus Development Conference Statement of the National Institutes of Health in the United States.¹³

The Committee recommends that patients considering treatment with ECT be provided with the following information, in terms that are meaningful to them:

1. The nature and seriousness of the disorder.
2. The nature and character of the procedure.
3. The reason for treatment.
4. The number of treatments.
5. The possible risks and side effects, including post-treatment confusion and long term memory loss.
6. The probable degree and duration of improvement or remission expected with or without ECT.

7. The treatment alternatives, with associated benefits, risks and side effects, including the option of no treatment at all.
8. That the treatment remains a controversial one about which there is a substantial difference of opinion.
9. The right to revoke consent for any reason at any time.

In discharging the obligation to inform the patient fully, the physician must represent in good faith the current weight of psychiatric opinion, although he may indicate any reasonably based contrary views which he holds.

The Committee recommends that there be ongoing discussion with the patient regarding the ECT procedure and side effects. In addition, printed information on ECT, as well as on patient rights (including the right of access to a patient advocate or a lawyer), should be distributed to the patient, who should be given the opportunity to read the material, ask any questions that may arise and seek further advice. In some institutions it will be necessary to have access to interpreters and to have the printed information available in French and other languages and in braille or tape form. This recommendation should have wider application and should not be limited to ECT.

The Committee recommends that the consent form be specific to ECT, and should inform in simple and understandable language. However, the information on ECT may be attached as a separate sheet to the actual consent form, if this is considered less burdensome for administrative purposes. The consent form should contain a statement that the person signing understands that there is a right to revoke the consent at any time.

The physician providing the information and obtaining the signed consent should be required to sign a statement indicating the explanations given and his or her impressions concerning the patient's understanding and appreciation of the information. The physician's statement, along with the signed consent, should form part of the medical record. One further recommendation regarding the physician's statement is made in the next section of this chapter entitled *Voluntariness*.

Notwithstanding a consent form has been signed, there should be discussion with the patient throughout a course of treatments of all relevant information, the earlier consent to treatment, and the right to approve or refuse the continuing treatment, so as to allow a reasonable opportunity to make an informed and free choice. The patient's competence to consent should be evaluated by the physician throughout the course of treatments to ensure that treatment is given on proper authority (i.e., the patient or a legally authorized proxy, depending on whether the patient is competent to consent to treatment personally). In essence, a physician must satisfy himself or herself that the consent that was obtained at the beginning of a course of treatments remains valid.

For administrative purposes, a consent form may specify a course of treatments (up to a stated maximum) for which the consent may remain valid. However, the consent form shall cease to be valid if revoked or upon discontinuance of treatment after reassessment of the patient.

The foregoing recommended consenting process demonstrates the importance the Committee attaches to a person's right to be fully informed before making a treatment decision and of having every reasonable opportunity to exercise autonomy.

In the absence of consent to treatment, ECT should not be used. ECT should not be used for restraint.

C. VOLUNTARINESS

Consent, even if informed, must be provided freely. The requirement of voluntariness has not been the subject of much legal discussion. Some of the issues that arise in discussions of this requirement are as follows: What external causes outside of the patient's control serve to vitiate freedom, to render any consent obtained 'unfree'? Many physicians believe that a patient who is told that a certain medical procedure offers his only hope of survival has been given a 'forced choice', that the resulting consent was not freely offered. Pressures from family are often felt to force choice. Some have argued that patients in a psychiatric facility, particularly involuntary patients, are in an 'inherently coercive environment' and therefore their choice cannot be freely made.

In some situations there can be a fine line between threats and offers, and difficulty may arise in differentiating between them. Intuitively, it may seem that actions performed under threat are coerced, while actions performed under offer are freely performed. A depressed patient is told that he has no hope of release unless he undergoes ECT. Is this a threat that, unless he undergoes ECT he will continue to be confined, or an offer that he will be released provided he undergoes ECT?

Comment on Voluntariness

The Committee became aware of several instances in which patients alleged that ECT was given against their will or that threats were used in obtaining consent. These allegations caused the Committee concern. Consent given under coercive circumstances or undue influence of any kind voids the consent given. To be valid, a consent must be given in circumstances where the person can freely choose or refuse the proposed treatment.

The Committee believes that there is a distinction between a true threat and a prediction of what will happen if there is no treatment. It is appropriate for the physician to speak to the reasons why ECT is being recommended. However, no threats should be made. Under no circumstances should the patient be told that his or her legal status (informal or involuntary) is dependent on consenting to ECT. However, it is not a threat to predict that, without ECT, the patient's chances of recovery in the near future are slim, although the prediction may be perceived as a threat by the patient. Indeed, it is necessary for a physician to disclose the patient's prognosis in order to fulfil the duty to inform the patient of the risks and benefits of treatment.

Free choice, within the context of a psychiatric institution, is subject to many external influences which may, alone or in combination, be overwhelming. Free choice must also be considered in the context of competency to consent to treatment, which is discussed in the next section of this chapter.

The Committee recommends that a physician, upon obtaining a consent to treatment, confirm in writing that the patient understood that he or she could freely choose between the treatment recommended and refusal of the treatment; and that the patient freely made the treatment decision and, to the physician's

knowledge, without undue influence. Such confirmation should form part of the physician's statement which is to accompany the signed consent as part of the patient's clinical record, as described in the previous section of this chapter entitled Informed Consent.

D. COMPETENCY TO MAKE TREATMENT DECISIONS

For a consent to be valid, it must be offered by a competent individual. Competency to make treatment decisions is the most complex element of the doctrine of consent to treatment.

Definition of Competency for Making Treatment Decisions

Disparate criteria to define competency to make treatment decisions have been proposed in the legal and ethical literature. Included among these are the following:

- (a) The patient has the ability to understand and appreciate the nature and consequences of the choice to be made.
- (b) The patient has actual understanding of the choice to be made.
- (c) The patient can furnish rational reasons for the choice.
- (d) The patient chooses reasonably.
- (e) The patient has the ability to express a choice.

A patient may be competent to decide some matters but not competent in other respects. The test of mental competence found in the Ontario Mental Health Act is test (a) above, focusing upon the ability to understand and appreciate the nature and consequences of the particular choice involved. "Mentally competent" is defined in section 1(g) as:

...having the ability to understand the subject-matter in respect of which consent is requested and able to appreciate the consequences of giving or withholding consent.

(emphasis added)

The criteria for competency in this definition have been criticized in the literature on a number of grounds. How far do the "consequences" of choice which must be "appreciated" extend? The effects of some choices — e.g., to undergo electro-convulsive therapy or not — can extend for a lifetime. In addition, the above criteria betray an intellectualist bias. A person — a patient — may be relatively less impaired intellectually than emotionally. He or she may understand what is going on, but be incapable of responding appropriately. A severely depressed patient asked to consent to ECT may understand the implications of the choice, but be in a paralysis of volition and unable to respond. Further difficulties surround the notion of "appreciating" the nature and consequences of the choice. Generally speaking, one does not appreciate a factor unless one weighs it adequately and appropriately. Thus, test (a) may, in fact, encompass other criteria — the rational reasons test and the reasonable result test (tests (c) and (d) above).

Is a patient who is competent to consent to treatment always competent to refuse treatment? Most of the criteria of competency discussed above seem to dictate a strict parallelism between consent and refusal. In order to understand the ramifications of choice, or present rational reasons for it, one must also comprehend the alternatives, among which is always the option of doing nothing (i.e., refusal).

In practice, it would appear that, where a patient 'consents' to treatment, the physician might not address the question of whether that patient is competent to have chosen at all. A refusal may even be taken as an indication of incompetence. Implicitly, it would follow that a patient may be considered competent to consent but incompetent to refuse.

Determination of Competency to Make a Treatment Decision

Another area of concern is that of competency determination: who makes the decision that a patient is incompetent to consent to or refuse treatment, and how and when is that decision made? Who is competent to determine competency? Most specifically, is it a psychiatrist or a judge — or perhaps a tribunal? Competency in the sense relevant here is a status in law, not a medical status — although, depending upon the criteria chosen, expert medical testimony may be needed in the determination. The Committee's primary concern centred on the

determination of competence to make treatment decisions for informal patients and for "involuntary patients", as defined in the Mental Health Act. The Committee did not consider separately those patients who are detained under Warrants of the Lieutenant Governor; patients on remand from the courts; or patients admitted for a psychiatric assessment under the Mental Health Act to determine whether they fall within the criteria for involuntary commitment.

The Mental Health Act does not provide a specific mechanism for the determination of the mental competence of patients to consent to or refuse treatment. However, this statute does set out a detailed process for the determination of competence to manage one's estate.

Pursuant to the Mental Health Act,¹⁴ all patients who are admitted to a psychiatric facility must undergo a physician's assessment upon admission to determine whether or not that patient is competent to manage his or her estate. Once the examination of the patient is complete, the physician must enter his determination, together with his reasons for the determination, on the patient's clinical record.¹⁵ Upon the physician making such determination of incompetence, the individual is deemed to be incompetent to manage his affairs, and a committee for his estate is appointed. A committee under the Mental Health Act is a person who has the responsibility for the care and management of the estate of a person who has been determined to be incompetent. Determination of mental incompetence made in this manner may be reviewed by a regional review board on application of the patient and the board's decision is appealable to a court of law.

It is clear from the statute that a determination of incompetence and appointment of a committee is a mechanism formulated to deal only with matters which are financial in nature. Such committee of the estate does not, and should not, make treatment decisions.

"Informal" psychiatric patients are those persons who are admitted to a psychiatric facility under the Mental Health Act with their own compliance. They are not the subject of a physician's application for involuntary admission, or of an order for such admission. Their status enables them to leave the psychiatric facility upon their own initiative.

When an informal patient is unable to consent to treatment in writing by reason of mental or physical disability, the consent may be signed by a spouse or a parent, guardian or next of kin of the patient, as provided under the Public Hospitals Act and (since June 1985) under the Mental Hospitals Act.¹⁶ (Some have questioned whether the term "medical treatment procedures" in the aforementioned provisions should be understood to encompass psychiatric treatment.) There is no provision under these statutes for proxy consent when there is no next of kin available. There is no statutory proxy consent provision applicable to informal patients at Homewood Sanitarium, a psychiatric facility under the Private Sanitaria Act.¹⁷

"Involuntary" psychiatric patients are persons who are detained in a psychiatric facility under a certificate of involuntary admission or a certificate of renewal. They are unable to leave the psychiatric facility upon their own initiative. The criteria for involuntary admission are that the person is suffering from a mental disorder of a nature or quality that will likely result in serious bodily harm to the person or another person, or imminent and serious physical impairment of the person, unless the person remains in the custody of a psychiatric facility.

Section 35(2) of the Act provides, among other things, for consent to treatment for an involuntary patient who is not mentally competent, as follows:

Psychiatric treatment shall not be given to an involuntary patient without the consent of the patient or, where the patient has not reached the age of majority or is not mentally competent the consent of the nearest relative of the patient, except under the authority of an order of a regional review board made on the application of the officer in charge.

(emphasis added)

A finding that an involuntary patient is "not mentally competent" has far reaching consequences in terms of treatment. The patient's wishes may be overridden. The wishes of a relative of an incompetent patient, no matter how involved or uninvolved with the patient, may be determinative. A regional board of review has jurisdiction to override refusal of the legally designated proxy of an incompetent patient.¹⁸ Yet for all of the consequences, the statute provides no mechanism or standards for the determination of competence to make treatment decisions.

Presently, a single physician both forms an opinion regarding a patient's competence to make treatment decisions and renders a final, unappealable decision in that regard. It should be noted that there is currently a Bill before the Ontario Legislature which, if it becomes law, will amend the Mental Health Act.¹⁹ Bill 7 (An Act to amend certain Ontario statutes to conform to Section 15 of the Canadian Charter of Rights and Freedoms) received second reading on October 22, 1985. One of the proposed amendments would provide for a hearing, on the application of an involuntary patient, to enquire into whether the patient is not mentally competent to consent to psychiatric treatment and to confirm or revoke determination to that effect.

In Ontario, regional review boards for psychiatric facilities are constituted under the authority of the Mental Health Act.²⁰ A review board is composed of at least one lawyer, one psychiatrist and one lay member.

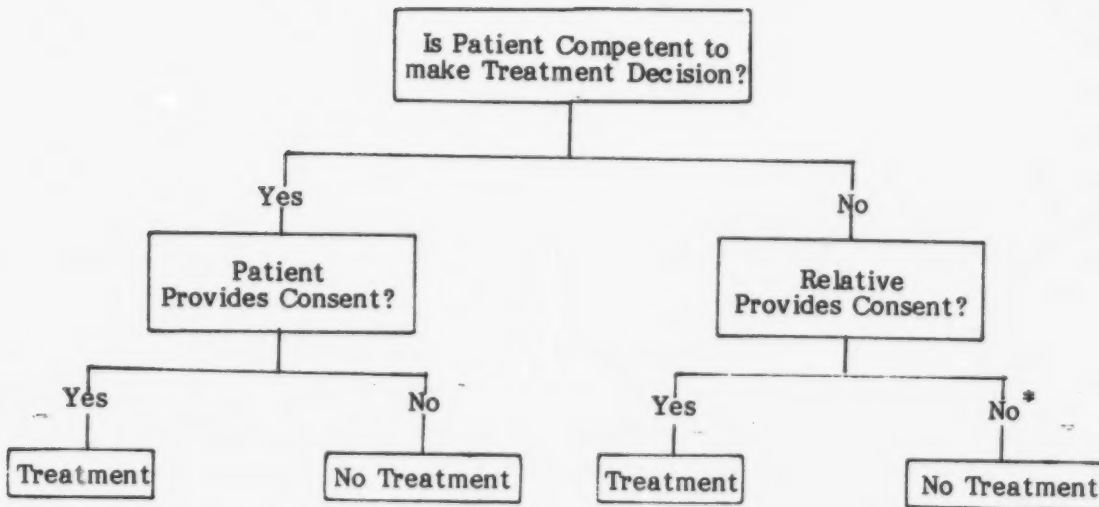
The board has three areas of jurisdiction under the Mental Health Act: it may confirm or revoke certificates of involuntary admission; it may provide authority under prescribed circumstance for psychiatric treatment to be performed; it may confirm or revoke certificates of mental incompetence to manage one's estate. The board does not have currently the jurisdiction to determine a patient's competence to make a treatment decision. Bill 7 would expand the board's jurisdiction to include a hearing to confirm or revoke a determination of mental incompetence of an involuntary patient to consent to psychiatric treatment.

As of March 1984, amendments to the Mental Health Act provide for increased procedural rights for patients, including the right to a hearing, the opportunity to examine written evidence, the right to examine the clinical record, and the right of access to counsel or an agent.²¹ The Board's decisions are appealable to a district court.

The current scheme for treatment decisions under the Mental Health Act is summarized in the flow chart on the following page.

THE TREATMENT DECISION
(under current Mental Health Legislation in Ontario)

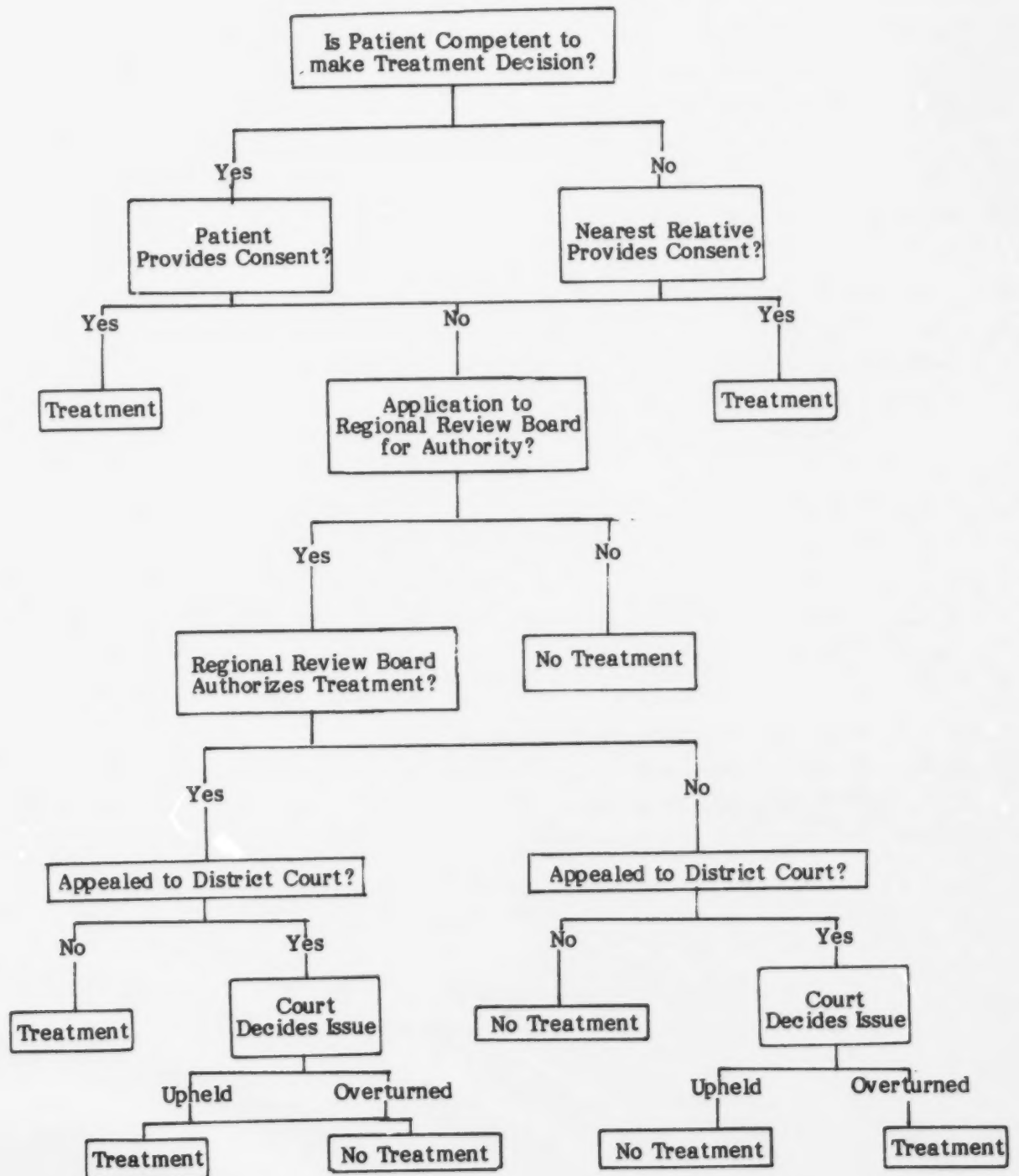
INFORMAL PATIENT



* Where a relative of an informal incompetent patient is not available or is unwilling to provide consent, Ontario mental health legislation makes no alternative provision for a proxy decision-maker.

THE TREATMENT DECISION
(under current Mental Health Legislation in Ontario)

INVOLUNTARY PATIENT



Comment on Competency

The Committee firmly believes that the definition of competency to make treatment decisions must be clarified and expanded; that there must be established a process for the determination of competency in a judicial or quasi-judicial manner; and that unless an individual is determined by this process to be incompetent to make treatment decisions, such individual should have the absolute right to consent to or refuse treatment, and this decision should not be subject to review. The Committee recommends that the Mental Health Act be amended accordingly. Although the Committee acknowledges that the amendments contained in Bill 7 are a step forward, it is the Committee's belief that further reform is necessary as recommended below.

It is essential to ensure that the person consenting to treatment is competent to do so. The Committee is of the opinion that the determination of competency to make treatment decisions is a crucial step with serious consequences and, as such, must be subject to requirements of procedural fairness and must be appealable, in keeping with provisions of the Canadian Charter of Rights and Freedoms.

The determination of competency in this context is for the purpose of providing a valid consent or refusal to a proposed treatment mode.

It is suggested that the following elements are essential to procedural fairness in the determination of competency to make treatment decisions:

1. Determination of the fact of incompetency by an impartial and independent arbiter, taking into account properly admitted evidence including expert testimony.
2. Notice of the proceeding to the patient, by personal service of all relevant material which will be placed before the arbiter.
3. Adequate opportunity to participate in the proceeding: to question, challenge evidence and adduce evidence to the contrary.
4. Legal representation by counsel if desired.

5. Determination of the fact of incompetency only where the arbiter is satisfied on clear and convincing evidence, given that under common law a person is presumed to be competent.
6. A speedy determination of the issue and a certain avenue for review or appeal.

The current system involves the determination of competency by the physician alone. This mode of competence determination is simple, and is uncomplicated by process or administrative procedure. It is an option which is inexpensive to implement and administer, and which might be improved by the adoption of clinical or regulated guidelines.

However, even if such guidelines were in place, there is a more disturbing aspect to competence determination by the physician himself or herself. Essentially, one party to a relationship decides that the other can or cannot participate in the process. The physician must adopt a dual role, that of judge and service provider. Moreover, this basic juridical function is performed by the physician without the benefit of any legal training.

Competency determinations for this purpose have an enormous impact upon the life, liberty and security of the individual. There must exist the right to appeal. Under the current scheme of the Ontario Mental Health Act, physician-made competence determinations for the purpose of consent to treatment are not subject to review or appeal. The proposed amendments in Bill 7, if passed, will rectify this omission for involuntary patients.

The case for adoption of a model which requires judicial determination of mental competence for treatment decisions has merit. It should be the model of choice if one is seeking a mechanism which is constitutionally unassailable, consistent with the Charter of Rights, and respectful of the far reaching consequences of a finding of incompetence for the purpose of making treatment decisions. However, the Committee has some serious concerns about the practicality of the court model, given the need for speedy determinations of competency questions. Patients whose competence is in question may be in need of immediate treatment, and any delay may be detrimental to their well being.

A tribunal model offers a practical option for competency determinations in Ontario in that there already exists a mental health tribunal in the form of regional review boards. The Committee recommends that the jurisdiction of the regional review boards be expanded to include determinations of competency to make treatment decisions, upon application by the physician, patient or interested party, at the time the question of the patient's competency for this purpose is first raised. The jurisdiction should extend to both informal and involuntary patients. In addition to the physician, the patient or any interested party so found by the board should have the right to raise before the board the question of the patient's competence to make treatment decisions. The decision of the board should be reviewable with leave of the board to consider altered circumstances. This increased jurisdiction may necessitate the establishment of permanent sitting review boards readily available for prompt decision-making.

As mentioned previously, amendments to the Mental Health Act in 1984 provide increased procedural protections for patients appearing before the Board. There is an appeal to a district court as of right from decisions of the board and this element of process is essential.

The Committee believes that patients whose competency is to be determined for treatment purposes should have the benefit of professional advice prior to a review board hearing. Such advice could be provided under a program for involuntary psychiatric patients, which is in the process of being implemented by the Ontario Government. The program arises out of Section 30a of the Mental Health Act, which provides for notification of the patient and Legal Aid whenever a certificate of involuntary admission or a certificate of renewal is completed. Commencing in January 1986, duty counsel, community legal aid clinic staff or a patient advocate will respond to each notice received. Involuntary patients will be informed personally of their right to counsel, their right to a review by the Regional Review Board and their right to appeal the board decision. The Committee recommends that the circumstances under which notification pursuant to Section 30a applies, and the scope of the above advisory program, be expanded to include all patients who receive notice that their competence to make treatment decisions will be determined by a regional review board.

The test of whether an individual is competent to consent to or refuse treatment should be directed specifically to that very question. The Committee recommends that the test should be composed of the following elements:

- . Ability to understand and appreciate the physician's basis for recommending treatment.
- . Ability to understand and appreciate the effects of treatment — both positive and negative.
- . Ability to understand and appreciate the likely consequences of the absence of treatment.
- . Ability to incorporate the information in responding to a physician's recommendation.

This last element of the proposed test is intended to rectify some problems with the current definition, and to grant a further means for medical understanding and experience to contribute to the determination of competency. (1) This element implies that a patient must express a settled choice to be considered competent. A patient who is unable to express a choice, or whose desires constantly fluctuate, should be judged incompetent because of this element, even if the patient, on an intellectual plane, understands and appreciates the information relevant to a treatment choice. (2) This element implies that a patient whose treatment choice is entirely founded upon a pathological delusional belief should be judged incompetent, even if in other respects the patient had apparently comprehended the relevant treatment information. (3) This element is designed to reflect the emotional components that may be present in mental disorder. Where the patient's emotional state is such as to prevent the patient from applying the information learned regarding the treatment choice, the patient should be judged incompetent by reason of this factor. The review board would need to consider whether, for example, a patient's intense feelings of guilt or worthlessness are so powerful as to dictate the treatment decision the patient reaches, blocking out all consideration on his or her part of the relevant treatment information.

The Committee emphasizes that the foregoing elements of the competency test are interdependent and that this recommendation must be considered as a whole.

In determining whether a patient is competent, the review board should not be influenced by its judgment of the reasonableness of the result. The above elements speak to the process of decision-making employed by the patient, not to its outcome.

It is not necessarily determinative of the fact of incompetency to make treatment decisions that a patient may be unable to appreciate the extent of his or her estate, or may not have the requisite mental competence to manage his or her financial affairs without help; or that the patient suffers from periodic memory loss, suffers from disorientation as to time and place, suffers from a form of delusion or lacks insight into his or her emotional condition.

Without reflecting on the capability of the members of the regional review boards, the Committee believes that, with the additional responsibility of determining competence to make treatment decisions, there should be a formal mechanism for orientation to the issues that board members will be facing, as well as on-going educational programs. It would also be desirable for decisions to be reported so as to develop a body of case law in this area. Ready access to the board is essential regardless of geographic location within Ontario and legal status of the patient.

In proposing an absolute right to refuse treatment (whether by competent patients or proxies of incompetent patients), the Committee recognizes that there may be cases where all treatment is refused. The treatment decision would never be subject to review. The Committee is concerned that this would in some cases result in a patient who meets the criteria for involuntary committal under the Mental Health Act not receiving treatment yet being unable to leave the facility.

It is the belief of a substantial majority of the Committee that the physician should not be expected to provide ongoing psychiatric advice to involuntary patients where all psychiatric treatment is refused. (One member of the Committee does not share the views of the majority of the Committee in this regard.) Patients should be informed of their right to seek out another physician, if they so desire, recognizing a physician ought not to be expected to continue to provide care to such patients (subject to the obligation of the physician under the Ontario Health Disciplines Act²² to continue to provide professional services to a patient until the services are no longer required or until the patient has had a reasonable opportunity to arrange for the services of another member). The Committee acknowledges that the incidence of all psychiatric treatment being

refused by involuntary patients may be rare. However, there should be provision for a residential facility to accommodate this special situation to which such persons should be transferred.

In recommending that determination of incompetency of psychiatric patients be made in all cases by a regional review board, with all attendant procedural protections, the Committee recognizes that this proposal has significant financial and social ramifications but is firm in its belief that such reform is essential on medical, ethical and legal grounds.

D. PROXY CONSENT

A proxy is a person authorized to perform certain acts or make certain decisions on behalf of another person. In an ideal world, all individuals would have total autonomy and would have the absolute right to make treatment decisions for themselves. However, it is not an ideal world and it is recognized that at times it is necessary to have an alternate mechanism for obtaining authority to treat. It should be noted that there is a body of opinion that no one should be subject to treatment based on proxy consent.

Who should serve as proxy to consent to medical treatment? The major choices discussed in the literature, though not always clearly distinguished from one another, are:

1. The nearest relative of the incompetent.
2. The person who is most involved with (or most burdened with) continuing care for the incompetent.
3. The physician or team caring for the incompetent.
4. A group of physicians and other health care workers, including some involved in the incompetent's care and others uninvolved.
5. An interdisciplinary committee in the health institution; it is often said this should include lay representation and someone from theology or ethics.

6. A court; generally under this option, a judge.
7. The person best acquainted with the wishes held by the incompetent during a prior period of competency.

What favours choice of one or another mechanism for proceeding? The choice of decision maker should come after the choice of a criterion upon which the decisions should be based, to ensure a rational relationship of means to ends. One exception is with respect to involvement of near relatives who are said to have a right to decide. But do they retain that right in cases when they exercise it against the best interests of the incompetent? There may be a conflict of interests between the family and the incompetent, or the family may simply be unequipped to ascertain the patient's best interest in complicated circumstances. On the other side, there are a number of writers who argue that, even if the family would logically be the right decision-maker, they should be shielded from the emotional consequences of making or refusing to make the difficult decisions involved.

Presently, the Mental Health Act provides for a proxy treatment decision, for involuntary patients only, in three different situations:²³

- . If an involuntary patient is considered to be incompetent to make treatment decisions, his or her nearest relative is empowered to make a proxy decision. The Act lays out in some detail how to determine who the nearest relative is.²⁴
- . If an involuntary incompetent patient has no available nearest relative, the regional review board is the proxy decision-maker.
- . If an involuntary competent patient, or the nearest relative of an involuntary incompetent patient, refuses treatment, the regional review board can overrule that refusal and substitute its own decision.

For informal incompetent patients, there is no provision in the Mental Health Act for proxy consent. However, the Public Hospitals Act and the Mental Hospitals Act have proxy consent provisions for informal patients. (As mentioned earlier in this chapter, some have questioned whether these provisions apply to psychiatric

treatment.) Most psychiatric facilities in Ontario are governed by one of these latter two statutes. Under these Acts, "the spouse or a parent, a guardian or next-of-kin" may provide proxy consent. Where there is no spouse, parent, guardian or next-of-kin, there can be no authority for treatment.

On what basis should a proxy decision-maker consent to or refuse a procedure? Standards which have been suggested in the literature include:

1. "Standing in the shoes" test - consent to what the patient would want.
2. "Reasonable Person" test - consent to that to which an average, reasonable patient would consent under the circumstances.
3. "Best Interests" test - consent to that which is in the objective best interests of the incompetent patient.
4. "Least Restrictive Alternative" test - consent to the treatment that least interferes with the patient's autonomy.
5. "Society's Best Interests" test - consent to that which is in the best interests of society.
6. A combination of some or all of the above.

In laying down the basis for a treatment decision made by a regional review board, the Ontario Mental Health Act sets out a version of the "best interests" test.²⁰ Treatment is to be authorized if, in the opinion of the Board, the proposed course of treatment is likely to result in a substantial improvement in the patient's mental condition, and if it is unlikely that there will be improvement without the proposed treatment.

The Mental Health Act is silent as to what criteria a nearest relative should apply in providing a substitute consent. Likewise, the Public Hospitals Act and Mental Hospitals Act do not provide criteria by which a proxy should arrive at a treatment decision.

Canadian and American courts have shown considerable variation in their rulings as to what criteria should be applied. For example, in Wyatt v. Hardin²¹ the

Court stated that the decision should be based upon a review of a pertinent medical, psychiatric, psychological and social information concerning the patient and interviews with the patient, his family, or others who could contribute relevant information and the recommendation of a mental health professional. In this decision, great weight is given to any expression by the patient of a desire not to receive ECT, and any doubt must be resolved against authorizing the treatment. In the 1983 Quebec case of Institut Philippe Pinel de Montreal v. Dion²² the Court stated:

It would appear...that the courts frequently act as parens patriae in order to determine which solution is in the best interests of the child. In the case of a person who is of full age but has been declared incapable, this jurisdiction is exercised in order to determine which decision the incapacitated person would have made if he had been competent to decide.

(emphasis added)

It would appear that many jurisdictions do not indicate what the criteria for proxy decisions should be and that among those which have considered this question there is no consensus.

It is of interest that an analysis of the responses to the questionnaires which the Committee sent to the individual submitters indicates a strong positive correlation between a sense of being involved in the treatment decision and one's feeling towards the treatment. Those individuals who did not consent personally appear to have a more negative view of the treatment.

Comment on Proxy Consent

There would appear to be no reason why proxy consent provisions should differ for informal and involuntary patients. The Committee recommends that uniform statutory provisions be enacted dealing with proxy consent for all patients, regardless of legal status, who are determined to be mentally incompetent to make treatment decisions.

The Committee believes that there should be guidelines set up to determine who should be empowered to make a proxy decision and consideration should be given to those situations in which a nearest relative is not the most appropriate proxy. For example, under the current legislation, an estranged spouse can be asked to

render the proxy decision. The Committee believes that this is inappropriate. In addition, the current legislation is confusing in that, although it refers to a nearest relative, it does not address the situation where equivalent nearest relatives (e.g. parents) may disagree, and may invite the physician to go "shopping" for a proxy who will consent.

The Committee recommends that an individual, when competent, should be able to appoint a proxy decision maker authorized to act should that individual become incompetent at a later date. If a patient has not appointed a proxy, the regional review board should make this appointment at the time of the competency determination. The appropriate proxy need not necessarily be the next of kin, and sometimes may not be related to the patient. The proxy should not be someone who is involved in the treatment of the patient or who has any other conflict of interest. The regional review board, in appointing a proxy, should consider submissions from any interested party and should follow guidelines established for determining an appropriate proxy. This decision, as with all other decisions of the regional review board, should be appealable to a court of law by any interested party. In the absence of an appropriate individual who is willing to act as a proxy, there should be a public guardian designated by legislation.

The Committee recommends that the clearly expressed wishes of the patient when competent, if known to the proxy decision maker, be the criterion of first choice in reaching a proxy decision. However, when there is no information available as to what the individual would have chosen, the "best interests" test should be utilized.

The Committee believes that the same principles should apply to consent by an incompetent patient's properly appointed proxy as apply to consent by a competent patient. The Committee's recommendations on informed consent should apply equally whether the individual consenting is the patient or a proxy consenting on behalf of the patient.

No member of the Committee believed that treatment on the basis of proxy consent should be prohibited in all cases. Only one member was of the opinion that ECT in particular should never be administered on proxy authorization.

Where ECT is a proposed treatment for a child or an elderly person should there be special consideration with respect to proxy authorization of treatment?

Under the current provisions of the Mental Health Act, children cannot consent to psychiatric treatment on their own behalf unless they are 18 years of age. (Proposed amendments in Bill 7 would change this age requirement to 16.) The Child and Family Services Act, 1984 (proclaimed in part only at the time of this Report), which is under the jurisdiction of the Ministry of Community and Social Services, makes special provision for proxy consent to treatment for those children who are under the care of an approved agency and service provider under that Act, as outlined in the chapter of this Report on Legislation. For a child under 16 years of age, an intrusive procedure may not be used or permitted unless the proxy (e.g. a parent) consents. However, the consent of the proxy may be overridden by an interdisciplinary review team whose duty it is to review and approve or refuse proposed use of intrusive procedures. The same power to override consent applies where a child who is 16 or 17 years of age consents on his or her own behalf.

The Committee has in the chapter on Consent recognized the absolute autonomy of the individual, and of a proxy decision-maker on behalf of an individual who has been determined to be mentally incompetent to make a treatment decision. The Committee has not seen fit to recommend special provisions for proxy consent on behalf of a child under the designated age. The Committee believes that its recommendations regarding proxy consent generally safeguard the interests of a child adequately.

The Committee likewise has not seen fit to recommend special provisions for proxy consent on behalf of the elderly.

Future Research

It is not known by what mechanism of action ECT produces its therapeutic effect. If this were known, there is good reason to expect that a more precise determination could be made of those persons for whom ECT has the potential to be particularly beneficial (or harmful), and that the adverse effects and risks of the procedure could be lessened or largely eliminated. Indeed, much of the controversy surrounding ECT is attributable to these acknowledged uncertainties which contribute to a lack of confidence in its efficacy and safety among some members of the public. Although in the last several years a number of alternative psychiatric treatments have been developed or refined, there remain certain seriously ill individuals who are non-responsive to known treatments other than ECT. For all these reasons there is a compelling rationale for promoting a concentrated research effort without delay.

The need for further research was emphasized in the 1978 Task Force Report on Electroconvulsive Therapy of the American Psychiatric Association and more recently in a statement published following a Consensus Development Conference on ECT sponsored by the National Institutes of Health in the United States in June 1985. Relevant excerpts from these documents are attached as Schedules "L" and "M" of this Report respectively.

The joint submission of the Ontario Medical Association and the Ontario Psychiatric Association to the Committee pointed out how research plays a vital role in improving standards of clinical practice in the use of ECT:

Every effort must be made to ensure that ECT is prescribed and administered in Ontario according to optimum standards of clinical practice. Those standards may evolve from methodologically sound research, the results of which may shape practice patterns. Alternatively, the prevailing clinical practice may simply be designated as the accepted standard. This is

particularly true when there is a paucity of well-designed research and/or if the findings are not sufficient to outweigh the clinical impressions of most practitioners. This certainly is the case with the practice of ECT in which significant issues concerning the indications and therapeutic dosage either have not been investigated or have been with poorly designed studies. Certainly there is good reason to question the rationale for some presently recommended standards. (77)¹ Therefore, they must be under constant review in light of new knowledge to obviate their perpetuation as absolutes or as ideals without consideration of the exigencies of clinical practice.

As discussed in the chapter of this Report entitled Data and Record Keeping, there is a lack of even the most basic descriptive statistical data on the use of ECT in Ontario, which led the Committee to recommend the development of a province-wide data base for, among other things, a resource for future research. It was evident to the Committee that a one-time survey is totally inadequate for any purpose, since the information is inevitably incomplete, inconsistent and, in many cases, inaccurate.

COMMENT

The Committee recommends that the Minister of Health establish two research programs, one of which will investigate ways of improving ECT treatment to maximize its benefit and minimize its adverse effects, particularly the effects on memory; and the other of which shall investigate the mechanism(s) by which ECT produces its therapeutic effect. In establishing these clinical and basic research programs, it is recommended that the Minister consult with the Ontario Mental Health Foundation, Ontario Medical Association, Ontario Psychiatric Association, the Health Science Centres and such other bodies as he deems appropriate.

Recognizing that there are some people who will refuse ECT in any event (as discussed in the chapter of this Report on Consent) and that there are some for whom known alternative treatments are ineffective or even harmful, the Committee recommends that research into alternative treatments be included in the aforementioned research programs.

Future research projects on ECT should be considered in relation to research already underway in Ontario and elsewhere in Canada, so as to avoid unnecessary duplication of research effort.

Recommendations

The reasons for the recommendations set out below are contained in the Comment sections which appear throughout this Report. The Committee recommends:

CHAPTER 2: EFFICACY, INDICATIONS AND CONTRAINDICATIONS

1. That ECT continue to be available as a mode of psychiatric treatment in Ontario. However, the Committee recognizes the necessity of extensive safeguards relating to the use of ECT based on sound legal, ethical and medical principles.

CHAPTER 4: PROCEDURAL ASPECTS OF ECT

2. That a patient be re-evaluated after each ECT treatment, whether prescribed by a course of treatments or otherwise, and ECT not be continued until the patient has been assessed as to desired improvement and severity of those side effects that are cumulative.
3. That the attending physician be present during the administration of ECT and, if not present, be satisfied that the physician administering ECT is experienced in the use of the procedure and is familiar with the patient's clinical condition and the history.
4. That a second psychiatric consultation be required in each of the following situations:
 - (1) The patient or the physician requests a second opinion.
 - (2) The patient is incompetent to make a decision about treatment.

- (3) The patient's disorder falls outside the commonly accepted clinical indications for ECT. (See the chapter of this Report entitled Efficacy, Indications and Contraindications.)
 - (4) The patient is suffering from a depressive disorder and has received 12 treatments without significant improvement.
 - (5) The patient is suffering from schizophrenia and has received 15 treatments in one course of ECT without significant improvement.
5. That each facility in which ECT is administered establish an ECT Audit Committee along the lines of other medical audit committees, to ensure that appropriate procedures are followed in the administration of ECT and that only those individuals qualified to do so are authorized to administer ECT.
 6. That written clinical procedures for ECT be in place in each hospital in which ECT is administered.
 7. That rules and regulations be formulated by hospitals in which ECT is administered to govern the granting of hospital privileges for the administration of ECT, which may include continuing education requirements.
 8. That the Ministry of Health and other appropriate bodies collaborate with the medical schools for the continuing development of curricula for education in the use of ECT, and that psychiatric residency programs include complete ECT training, e.g., indications, contraindications, risks, clinical management, informed consent and evaluation of outcome.

CHAPTER 5: EQUIPMENT

9. That the Ministry of Health, in consultation with appropriate bodies, develop and establish by regulation minimum standards for ECT equipment (including minimum performance specifications), and that all ECT equipment in use in Ontario be required to meet such minimum standards.
10. That the regulation further provide that ECT equipment be maintained and calibrated at least every six months by a qualified clinical engineer.

11. That standardized measurement devices be required for ECT equipment, to enable comparisons to be made of the amount of current administered in different clinical settings.
12. That EEG equipment be available to monitor brain activity concurrently with the administration of ECT, to allow measurement of the length and duration of the seizure as well as the success of the attempt to induce convulsion.

CHAPTER 6: DATA AND RECORD KEEPING

13. That within each psychiatric facility in which ECT is administered, standardized information regarding ECT be recorded by the physician in a specific place in the patient's medical record. The information should include, but not necessarily be limited to: the indications for ECT; diagnosis according to a standard diagnostic system; history including previous ECT; number of treatments; outcome; side effects; competency to consent to treatment; nature of the authority for the procedure; stimulus, dose, electrode placement; and patient legal status, sex and age.
14. That the Ministry of Health require mandatory reporting by hospitals of data on the use of ECT to a central data bank. These data should be used to monitor the use of ECT province-wide and to identify and deal with any unusual or unacceptable practices. These data should be published annually and should be available to the public and to researchers.

CHAPTER 8: CONSENT

The following recommendations on consent apply to both involuntary and informal psychiatric patients, except where the context of a recommendation does not permit.

Informed consent

15. That patients considering ECT be provided with the following information:
 - a. The nature and seriousness of the disorder.
 - b. The nature and character of the procedure.

- c. The reason for treatment.
- d. The number of treatments.
- e. The possible risks and side effects, including post treatment confusion and long term memory loss.
- f. The probable degree and duration of improvement or remission expected with or without ECT.
- g. The treatment alternatives, with associated benefits, risks and side effects, including the option of no treatment at all.
- h. That the treatment is a controversial one about which there are differing opinions.
- i. The current weight of psychiatric opinion regarding the treatment.
- j. The right to revoke consent at any time.

In discharging this obligation to inform the patient fully, the physician must represent in good faith the current weight of psychiatric opinion, although he may indicate any reasonably based contrary views which he holds.

16. That there be ongoing discussion with the patient regarding the ECT procedure and side effects. In addition, printed information on ECT, as well as on patient rights (including the right of access to a patient advocate or a lawyer), should be distributed to patients, who should be given the opportunity to read the material, ask any questions that may arise and seek further advice. In some institutions, it will be necessary to have access to interpreters and to have printed information available in French and other languages and in braille or tape form.

17. That the consent form be specific to ECT, and inform in simple and understandable language. However, the information on ECT may be attached as a separate sheet to the actual consent form, if this is considered less burdensome for administrative purposes. The consent form should contain a statement that the person signing understands that there is a right to revoke the consent at any time.
18. That the physician providing the information and obtaining the signed consent be required to sign a statement indicating the explanations given and his or her impressions concerning the patient's understanding and appreciation of the information. The physician's statement, along with the signed consent, should form part of the medical record.
19. That, notwithstanding a consent form has been signed, there be discussion with the patient throughout a course of treatments of all relevant information, the earlier consent to treatment, and the right to approve or refuse continuing treatment, so as to allow a reasonable opportunity to make a free and informed choice.
20. That the patient's competency to consent to treatment be evaluated by the physician throughout the course of treatments.
21. That a consent form may (for administrative purposes) specify a course of treatments (up to a stated maximum number) for which the consent may remain valid. However, the consent shall cease to be valid if revoked or upon discontinuance of treatment after reassessment of the patient.
22. That in the absence of consent, ECT not be used.

Voluntariness

23. That a physician, upon obtaining a consent to treatment, confirm in the written statement referred to in Recommendation 18 that the patient understood that he or she could freely choose between the recommended treatment and refusal of the treatment; and that the patient freely made the treatment decision and, to the physician's knowledge, without undue influence.

Competency

24. That the test of whether an individual is competent to consent to or refuse treatment be directed specifically to that very question and be composed of the following elements:

- . Ability to understand and appreciate the physician's basis for recommending treatment.
- . Ability to understand and appreciate the effects of treatment — both positive and negative.
- . Ability to understand and appreciate the likely consequences of the absence of treatment.
- . Ability to incorporate the information in responding to a physician's recommendation.

This last element of the proposed test is intended to rectify some problems with the current definition, and to grant a further means for medical understanding and experience to contribute to the determination of competency. (1) This element implies that a patient must express a settled choice to be considered competent. A patient who is unable to express a choice, or whose desires constantly fluctuate, should be judged incompetent because of this element, even if the patient, on an intellectual plane, understands and appreciates the information relevant to a treatment choice. (2) This element implies that a patient whose treatment choice is entirely founded upon a delusional belief should be judged incompetent, even if in other respects the patient had apparently comprehended the relevant treatment information. (3) This element is designed to reflect the emotional components that may be present in mental disorder. Where the patient's emotional state is such as to prevent the patient from applying the information learned regarding the treatment choice, the patient should be judged incompetent by reason of this factor.

25. That the determination of competency to make treatment decisions be made by a judicial or quasi-judicial body. The tribunal model offers a practical option for competency determinations in Ontario, in that there already exists a mental health tribunal in the form of regional review boards. The jurisdiction of the review boards should be extended to include determination of competency to make treatment decisions. In addition to the physician, the patient or any interested party so designated by the board should have the right to raise before the board the question of the patient's competence to make treatment decisions. The decision of the board should be reviewable with leave of the board to consider altered circumstances. This increased jurisdiction may necessitate the establishment of permanent sitting review boards readily available for prompt decision making.
26. That, unless an individual is determined by a review board to be incompetent to make a treatment decision, such individual have the absolute right to consent to or refuse treatment, and that such decision not be subject to review. The Committee recommends that the Mental Health Act be amended accordingly.
27. That the following elements of procedural fairness be observed by a review board in the determination of competency to make treatment decisions:
 - a. Determination of the fact of incompetency, taking into account properly admitted evidence including expert testimony.
 - b. Notice of the proceeding to the patient, by personal service of all relevant material which will be placed before the board.
 - c. Adequate opportunity to participate in the proceeding: to question, challenge evidence and adduce evidence to the contrary.
 - d. Legal representation by counsel if desired.
 - e. Determination of the fact of incompetency only where the board is satisfied on clear and convincing evidence, given the common law presumption of competency.

- f. A speedy determination of the issue and a certain avenue for review or appeal.
28. That the circumstances under which notification pursuant to Section 30a under the Mental Health Act applies be expanded to include determinations of competency to make treatment decisions. It is desirable that the recently announced program to advise involuntary patients of their rights be extended to all patients who receive notice that their competence to make treatment decisions will be determined by the regional review board.
29. That involuntary patients who refuse all treatment be informed of their right to seek out another physician, if they so desire, recognizing a physician ought not to be expected to continue to provide care to such patients (subject to the obligation of the physician under the Ontario Health Disciplines Act¹ to continue to provide professional services to a patient until the services are no longer required or until the patient has had a reasonable opportunity to arrange for the services of another member).

Proxy Consent

30. That uniform statutory provisions be made dealing with proxy consent for all patients who are determined to be mentally incompetent to make treatment decisions.
31. That a statutory right be created for a competent individual to appoint, by appropriate instrument, a proxy to make treatment decisions in the event of future incompetency.
32. That, if a patient has not appointed a proxy, a regional review board make such appointment at the time of the competency determination. The board, in appointing a proxy, should consider submissions from any interested party. This decision, as all other decisions of the board, should be appealable to a court of law by any interested party.
33. That guidelines be established for regional review boards regarding the appointment of an appropriate proxy to make treatment decisions. The appropriate proxy need not necessarily be the next of kin, and sometimes may

not be related to the patient. The proxy should not be someone who is involved in the treatment of the patient or who has any other conflict of interest.

34. That a public guardian be designated by legislation to serve in the absence of an individual who is willing to act as a proxy.
35. That, if at any time a properly appointed proxy for making treatment decisions refuses to act, a review board, on application of an interested party, should appoint another proxy who is willing to act.
36. That criteria be established to assist the proxy in reaching a treatment decision on behalf of the patient. The clearly expressed wishes of the patient when competent, if known to the proxy decision maker, should be the criterion of first choice in reaching a proxy decision. Otherwise, the "best interests" test shall be applied.
37. That the same principles be applied to consent by an incompetent patient's properly appointed proxy as apply to consent by a competent patient. Recommendations 15 to 23 above on informed consent and voluntariness should apply equally whether the individual consenting is the patient or a proxy.

CHAPTER 9: FUTURE RESEARCH

38. That the Minister of Health establish two research programs, one of which should investigate the mechanism(s) by which ECT produces its therapeutic effect, and the other of which should investigate ways of improving ECT treatment so as to maximize its benefits and minimize its adverse effects.
39. That research into alternative treatments to ECT be included in the aforementioned programs.

Chairman's Conclusion

As presented in the preface to this Report, the appointment of the Review Committee arose in a background of public controversy surrounding electroconvulsive therapy as administered in psychiatric facilities in Ontario. The nature of the issues giving rise to the public controversy required an examination of them by a broadly representative committee chosen for their expertise, knowledge and experience as professionals or as members of the lay public. Each member brought a different perspective to the task.

Upon their appointment, the members of the Review Committee set out to obtain and study all relevant information, legislation, submissions of interested individuals and organizations, and various other materials. After thorough and critical examination and analysis of these materials, the review and consideration of position papers prepared by subcommittees, and lengthy debate and deliberation, the Review Committee reached certain conclusions and made a number of recommendations. The Chairman is satisfied that the Review Committee has fulfilled the commitments undertaken as set forth in the terms of reference. Each member was dedicated to the long and arduous task and extended every effort and co-operation.

Upon a consideration of all the issues, the members of the Committee, with one exception, favoured continuing the availability of ECT. To ban this treatment would deny to those who freely elect ECT — a medical procedure which can benefit persons suffering from certain mental disorders, where no other treatment modality is effective — the opportunity for a better and more useful life. For some, a denial of the treatment could mean confinement in a psychiatric facility for extended periods of time. While recommending continuance of the treatment, the Committee recognized the necessity of extensive safeguards relating to the use of ECT based on sound legal, ethical and medical principles.

The Committee felt that such safeguards must encompass at least the following elements, some of which apply not only to ECT but to psychiatric treatment in general.

- . Absolute autonomy of an individual, if competent, to consent to or refuse treatment (including a decision of no treatment at all).
- . Where competency to make a treatment decision is in question, determination to be made by an impartial tribunal, with a right of appeal to a court of law, all in accordance with the principles of fundamental justice.
- . Full procedural protection in regard to all aspects of proxy authorization of treatment, where an individual is found not competent to make that decision or is not of the age of majority.
- . Initiatives by the medical profession to promote high standards of practice.
- . Establishment of high standards for ECT equipment and maintenance thereof.
- . Recording of standardized information on ECT use in clinical records on a province-wide basis, and mandatory reporting thereof by hospital, so as to permit effective auditing of ECT use and to provide a reliable resource for future research.
- . Research initiatives to increase scientific and clinical knowledge of ECT, with funding priority.

The recommendations of the Review Committee place particularly heavy responsibilities upon the medical profession, the hospitals where ECT is administered, and the Ministry of Health. The Chairman holds the view that unless those responsibilities are accepted and fulfilled, there is a strong argument for the discontinuance of ECT as a treatment.

The Committee found substantial support among members of the medical profession for the continued use of ECT. Individual clinicians have to prescribe and administer ECT according to optimum standards of clinical practice, and to be responsive to new knowledge which may lead to improved standards, as was emphasized by the Ontario Medical Association and Ontario Psychiatric Association in their written submission to the Committee. The maintenance of standards of medical practice is not only a matter for individual members of the medical profession but as well for the College of Physicians and Surgeons of Ontario, whose statutory responsibilities include the establishment, maintenance and development of standards of knowledge, skill, practice and ethics among members of the medical profession in order that the public interest may be served and protected.

Institutions where ECT is administered have responsibilities for establishing high standards for ECT equipment and the maintenance thereof; ensuring high standards of clinical record keeping; establishing mechanisms for auditing the administration of ECT; and establishing performance standards for the employment of or the granting of privileges to physicians who administer ECT.

The Minister of Health has the responsibility for initiating legislative action, where such legislative action is necessary or desirable to fulfil the objectives of the recommendations. As well, he should assume a leadership role in ensuring that future research is undertaken.

The Chairman believes that implementation of the recommendations made in this Report should resolve in large measure the public controversy which gave rise to the creation of the Review Committee.



GLOSSARY OF MEDICAL TERMS

Adrenocortitrophic Hormone (ACTH): A hormone produced by the pituitary gland which stimulates the adrenal cortex, which secretes hormones that have complex metabolic functions.

Affective Disorders: This is the psychiatric term for mood disorders which are characterized by marked sustained changes in the sadness-gladness axis, to the extent that the person so affected is disabled in his day-to-day functioning.

Amenorrhea: Failure of menstrual periods to start by the expected age or cessation of menstrual periods once they have started.

Amnesia: A loss of memory. There are two main types of amnesia. **Retrograde amnesia** refers to the difficulty of recalling events preceding the onset of the amnesic period. **Anterograde amnesia** refers to the difficulty of learning new skills and of retaining events that occurred after the onset of the amnesic period. For our concerns, the amnesic period begins at the time of ECT (usually a series of ECT treatments).

Analgesic: A drug which relieves pain.

Ancillary Treatment: Treatment considered beneficial but not sufficient to produce appreciable improvement.

Anoxia: Inadequate supply of oxygen.

Anterograde Amnesia: See Amnesia.

Antidepressant Drugs: Drugs able to lessen or remove symptoms of a depressive disorder.

Antidiuretic Hormone: A hormone produced by the pituitary gland which acts on the kidney to reduce the volume of urine.

Aortic Aneurysm: A bulging of the wall of the aorta.

Artifact: In microscopy, any feature which has been introduced by handling or processing of tissue.

Atherosclerosis: A common form of arterial disease characterized by fatty deposits in the walls of arteries.

Atrophy of the Brain: An acquired reduction in the bulk of the brain, with associated loss of function.

Bilateral Electrode Placement: Placement of the electrodes so that one is on the left side of the cranium and the second electrode on the right side of the cranium.

Biochemical: To do with the chemistry of living tissues.

Biological Treatment: Treatment of a physical or chemical nature that alters the functioning of nerve cells and how they communicate with one another across the gaps between them (synapses).

Bipolar Disorder: Bipolar affective disorder is a mood disorder characterized by sustained abnormal mood changes of a depressive nature or an excited, enthusiastic nature (hypomania or mania). By convention, those patients who have manic symptoms alone are also included in the bipolar group.

Blood Brain Barrier (BBB): A distinctive feature of the blood vessels of the brain which restricts the passage into brain tissue of many substances present in the blood.

Bradycardia: Slowness of the heart rate.

Brain Capillary Permeability: The property of small blood vessels of the brain which permits transit of molecules or ions through them.

Brainstem: The part of the brain above the spinal cord and below the cerebral hemispheres which controls respiration and heart rate and is necessary for the conscious state.

Cardiac Arrhythmia: Any variation from the normal rhythm of the heartbeat. There are a number of types, some trivial, some life threatening.

Cardiac Defibrillator: An electric device used to counteract fibrillation (a cardiac arrhythmia)

Cardiovascular Collapse: Failure of the maintenance of blood pressure by the heart and blood vessels. Functional failure of the heart and blood vessels.

Cardiovascular Support: Therapeutic measures designed to strengthen the function of the heart and blood vessels.

Catatonic Excitement: Uncontrolled, unproductive overactivity that is repetitive and unvarying, and often destructive or assaultive. It may occur in catatonic schizophrenia.

Catatonic Stupor: A state of unresponsiveness without reduction of consciousness, often characterized by muteness, rigidity, waxy flexibility of the limbs, and maintenance of uncomfortable postures.

Cerebral: Pertaining to the cerebrum, the main portion of the brain.

Cerebral Aneurysm: A bulging of the wall of one of the cerebral vessels.

Cerebral Cortex: The outer layer of the cerebrum, which is rich in nerve cells.

Cerebral Edema: Increased water content of the brain tissue.

Cerebral Frontal Atrophy: Reduction in the bulk of the front portions of the cerebrum, with associated loss of function.

Cerebrospinal Fluid (CSF): Clear, colourless fluid filling the ventricles of the brain and the space surrounding the brain and spinal cord.

Cervical Spine: The portion of the spine located immediately below the head in the neck.

Clinical Data: Individual bits of information obtained during an assessment of a patient by a physician, gathered from the inquiry (history) or mental status examination.

Clinical Psychiatry: The branch of psychiatry concerned with the assessment and treatment of patients.

Clinical Research: Research on live patients (as opposed to animals or research using only specimens of tissue).

Clinical Trials: Trials of methods of treating patients.

Coarse Brain Disease: Structural brain disease that is not discernible without microscopic examination.

Computerized Tomography (CT): A non-invasive x-ray technique which produces images of soft tissues such as brain tissue, commonly referred to as CAT-scan.

Contraindication: An absolute indication not to use the treatment in question or a strong disadvantage to using such treatment.

Contralateral Side: The side opposite the side under consideration.

Convulsion: As produced by the electrical stimulus in ECT, it is similar to the grand mal seizure of epilepsy. It consists of: (1) immediate unconsciousness (2) a strong contraction of skeletal muscle for several seconds, (3) clonic movements, ie. intermittent contraction and relaxation of skeletal muscles lasting a longer period. Among other features are brief cessation of breathing (apnea), relaxation of bowel and bladder sphincters, and evidence of stimulation of the autonomic nervous system.

Current Density: Electric current is distributed more or less evenly over the cross-section of the conductor (e.g., a wire, or brain tissue in the case of ECT). Density of current refers to the amount of current per unit area perpendicular to the direction of the current. It is, therefore, a measure of how strong the current is in the particular region of the conductor.

Current Source: A generator of electrical power in which the current is a specified function of time. It follows that the corresponding voltage from the generator depends on the load attached to it.

Depression: A term used to describe: a) normal sadness; b) abnormal sadness that is a symptom of an underlying psychiatric disorder or systemic medical disorder; c) a disorder in itself (ie. an affective disorder).

Diffuse Nerve Cell Loss: Loss of nerve cells over a wide area of brain tissue.

Disarticulation: Separation or amputation at a joint.

Distal Muscles: Remote or farther from the centre of the body.

ECG (EKG): Electrocardiogram. A graphic record of the electric activity of the heart.

EEG: Electroencephalogram. A graphic record of the electric activity of the brain.

Electro-Convulsive Therapy: A medical procedure for the treatment of certain mental disorders in which a series of generalized or grand mal convulsions are induced by electrical stimulation of the brain.

Electrode: Usually metallic interface between the patient and electronic equipment, such as an ECT machine (where the equipment supplies electrical energy to the patient) or an electroencephalograph (EEG, where the equipment measures the electrical activity of the brain). An electrically conductive gel is often used between the electrode and the skin to improve the contact.

Endogenous: Although this term originally denoted a depressive disorder coming on apparently not in response to life events, it is currently used to define a specific depressive syndrome consisting of low mood, inability to obtain pleasure from usual activities, insomnia, loss of appetite, and usually consequent weight loss, and psychomotor agitation or retardation.

Epilepsy: A disorder of the brain characterized by recurring excessive nerve cell activity, manifested by transient episodes of motor, sensory or psychic dysfunction, with or without unconsciousness or convulsive movements. The seizure is associated with marked changes in EEG.

Fibrosis: Production and accumulation of fibrous (scar) tissue.

Focal Nerve Cell Loss: Loss of nerve cells in a localized area of brain tissue.

Frontal Lobes: Portions of the cerebrum closest to the front of the body.

Frontotemporal Electrode Placement: Placement of one electrode over the frontal bone and the second electrode over the temporal bone. (The frontal bone occupies approximately the front one third of the skull. The temporal bone is situated near the ears.)

Ganglion Cells: See Nerve Cells.

Glial Cells: The non-functioning supportive cells of the brain.

Gliosis: A reactive change of glial cells, characterized by increased number or size of glial cells or, later, by increased fibre content of those cells.

Global: Term used to describe a pervasive problem in a particular function, as in "global anterograde amnesia".

Gonadotropins: Hormones that stimulate the gonads, the principle source of which is the pituitary gland.

Grand Mal Convulsion: See Convulsion.

Haemorrhage: The escape of blood cells from blood vessels into the adjacent tissue.

Hemispheres of the Brain (Right and Left): The upper parts of the brain forming the cerebrum which is present as two largely separate halves on the left and right side.

Hemosiderin Pigment: A brown pigment which may be deposited in tissue following the breakdown of blood and is thus usually indicative of previous haemorrhage.

Hippocampus: A brain structure located in the temporal lobe which is involved in memory and often the site of damage in severely epileptic patients.

Histological Techniques: Laboratory methods for the demonstration of microscopic anatomy.

Hypercapnea: Excess of carbon dioxide in the blood.

Hyperoxygenation: The production of a state of hyperoxia (i.e. excess oxygen in the body) by exposure to high oxygen concentrations in the air that is breathed in.

Hypertension: Abnormally high arterial blood pressure.

Hypomania: A condition of pathologically elevated mood characterized by increased talking and activity and poor judgment. This condition is considered to be less severe than the full syndrome of mania.

Hypotension: Abnormally low arterial blood pressure.

Hypothalamus: A small portion of the brain at its base which activates, controls and integrates a number of basic bodily functions including endocrine activities, hunger and thirst, sleep, body temperature, blood pressure, etc.

Impedance: The opposition to the flow of an alternating current. More specifically, the ratio between voltage and current in a load. A measure of the voltage required to pass a certain current through a conductive medium. The impedance seen by the ECT equipment is the impedance of the brain tissue, plus that of the skull, scalp, and electrode interface.

Inanition: A pathological state of the body due to the lack of any foodstuff (including water) which is essential to the living organism.

Indication: The presence of a symptom, sign, or another clinical feature, or a syndrome of clinical features, predicting the efficacy of a certain treatment.

Insulin Coma: In psychiatry, the purposeful induction of a coma by the administration of insulin to lower the blood sugar. Coma is defined as a state of consciousness characterized by the absence of any psychologically understandable responses to external stimuli or inner need; or, only the most primitive (avoidance) responses to such stimuli.

Intracerebral Haemorrhage: Bleeding within the substance of the brain.

Intracranial Pressure: The pressure of the tissues within the cranium as reflected by the pressure of the circulating cerebro-spinal fluid.

Laryngoscope: An instrument combining a light system and a telescopic system inserted into the throat for direct viewing of the larynx.

Lobotomy: In practice, a lobotomy was a prefrontal lobotomy, a surgical removal of the prefrontal area of one or both frontal lobes of the brain. It has been superseded by leucotomy, a selective severing of the fibres joining the prefrontal area and the thalamus. A type of psychosurgery.

Mania: The opposite of severe depression. An abnormally excited, enthusiastic, happy or irritable mood found in patients suffering from bipolar disorder and characterized as well by increased motor activity, increased talking, disinhibition, unwarranted optimism and, at times, grandiose ideas.

Marginal Layer: The most superficial surface layer of brain tissue.

Melancholic Features: These features describe one of the most severe kinds of major depressive disorder (endogenous depressive disorder) and include: a) a distinct quality of depressed mood so that the patient distinguishes it from normal sadness; b) the depression is regularly worse in the morning; c) there is early morning awakening, at least two hours before the usual time of awakening; d) psychomotor retardation or agitation is of a severe nature; e) there is significant loss of appetite or weight loss; f) there is excessive or inappropriate guilt.

Memory: The ability to recall or to recognize information, events or skills learned in the past. In our review we will consider different types of memory processes.

Modified ECT: Administration of ECT in conjunction with anaesthesia and muscle relaxants, so that the involuntary body movements associated with seizures are reduced in intensity by temporary muscle paralysis.

Monoamine Oxidase Inhibitors: A group of drugs that cause reversible or irreversible inhibition of the enzyme, monoamine oxidase, which plays a part in the degradation of monoamines, numbered among which are the neurotransmitters epinephrine, norepinephrine, dopamine and serotonin. Some drugs in this group are antidepressants.

Morbidity: The quality of disease or being diseased.

Muscle Relaxants: In anaesthetic practice, these are drugs given to cause temporary paralysis of muscles.

Myelin Basic Protein: A structural component of myelin, the "insulating" layer around nerve fibres within the brain.

Myocardial Infarction: Death and subsequent scarring of a part of the myocardium (heart muscle) caused by inadequate supply of blood via a coronary artery.

Nerve Cells (Neurons) (Ganglion Cells): The cells of the brain which, by their electrical and chemical functions, perform the work of the brain. Their long extensions connect them with other neurons at junctions called synapses. If lost, they cannot be replaced.

Neuroendocrine: Pertaining to the interaction between the nervous system and the endocrine system.

Neurohumoral: Pertaining to neurohumors, hormones (chemical messengers) formed in nerve cells and affecting neighboring nerve cells.

Neuroleptic Drugs: Also called antipsychotic drugs since they most often bring about improvement in features of psychosis including delusions, hallucinations, and disorders of the form of thinking. The term "neuroleptic" refers to their effect on the extrapyramidal system (part of the motor system not under voluntary control) since, almost invariably, drugs that have antipsychotic effects also cause symptoms of movement disorders.

Neuromuscular Blocker: See Muscle Relaxants.

Neurons: See Nerve Cells.

Neuropathology: The branch of medicine dealing with structural and other aspects of disease of the nervous system.

Neurotransmitter: A chemical substance released from a nerve cell at a synapse to either excite or inhibit a second nerve cell.

Nucleus (pl. Nuclei): The integral part of every cell containing the chromosomes and essential for the maintenance of cell structure and function.

Oxygenation: Administration of oxygen.

Pathological: Diseased, abnormal.

Pathological Delusion: A (normal) delusion is a false belief that can be changed by persuasion or sufficient contradictory evidence. A pathological delusion is a false belief that is fixed (not responsive to persuasion, contradictory evidence, etc.), not shared by others, and not understandable in light of the person's intelligence and education.

Perception: The process by which people attach meaning to stimuli by interpreting their sensory input (e.g. visual and auditory recognition). Perceptual problems occur when the individual senses or receives the stimuli but does not interpret them correctly.

Perivascular Spaces: The tissue immediately outside a blood vessel.

Pharmacotherapy: Drug treatment.

Pituitary Hormones: Chemical substances secreted by the pituitary gland which have a specific regulatory effect on specific tissues at distant sites.

Placebo Effect: The effect of any treatment based entirely on the person's expectations, not on the known specific effect of the treatment. Both known effective and known ineffective treatment can produce placebo effects.

Postictal: Occurring after a seizure.

Process Schizophrenia: A term used to describe examples of the disorder characterized by gradual onset, withdrawal, self-absorption, and relatively poor prognosis.

Prolactin: A pituitary hormone which stimulates and sustains milk production.

Prophylactic ECT: ECT given as a single treatment periodically (usually every four to eight weeks) for patients with affective disorders that have shown a marked tendency to early relapse. The purpose of the treatment is to prevent relapses.

Psychosurgery: Surgery on the brain for the purpose of changing pathological thoughts, feelings, perceptions, or abnormal patterns of behaviour.

Psychotic Features: These are features of a disorder indicating that the person with the disorder is not able to assess reality. The most common psychotic features are delusions or hallucinations.

Psychotherapy: Any treatment using psychological methods.

Psychotropic Drugs: Drugs with a primary effect on mental functioning.

Pulsatile Stimuli: A stimulus with a pulsatile waveform.

Pulsatile Waveform: A current or voltage consisting of positive-going impulses, negative-going impulses, or both, with quiet intervals in between.

Refractory: Unresponsive.

"Regressive" or "Depatterning" ECT: ECT given for the purpose of producing organic mental changes with the hope that, with the resolution of the signs of the organic changes (eg. disorientation, memory loss), signs and symptoms of mental disorder will also disappear. It is an obsolete treatment.

Renal: Pertaining to the kidneys.

Retardation (Motor or Psychic): The slowing of movement or of thinking found in some depressions, not to be confused with mental retardation.

Retinal Detachment: Detachment of the retina (the light sensitive interior part of the eye) from the underlying tissue.

Retrograde Amnesia: See Amnesia.

Schizophrenia: A serious mental disorder coming on most often in the teens and twenties and characterized by withdrawal from reality, disorder of the form of thinking and reasoning, auditory hallucinations, ideas of influence, and pathological delusions.

Seizure: See Convulsion.

Serum Lithium Level: Amount of lithium in a specific volume of blood serum.

Servo-controlled: Controlled by a system such that small continuous mechanical displacement involving small expenditures of power by the controller cause proportionate displacements involving large amounts of power at a distance in the device being controlled.

Sickle Cell: A deformed, crescent-shaped red blood cell found in a form of anaemia occurring almost exclusively in black people.

Sinusoidal Waveform: A current or voltage varying smoothly in a wave-like manner between positive and negative values.

Somatic Treatment: See Biological Treatment.

Subarachnoid Space: A space surrounding the brain and spinal cord and filled with a clear watery fluid, the cerebrospinal fluid.

Tachycardia: Abnormal elevation of heart rate.

Tardive Dyskinesia: An involuntary movement disorder resulting most often from chronic use of neuroleptic drugs.

Temporal Gradient: A system of relations within an organism which involves progressively increasing or decreasing differences. For example, retrograde amnesia may be increasingly more pronounced for events the closer they occurred to the time that ECT was administered.

Temporally Graded Retrograde Amnesia: The difficulty of recalling events that preceded the onset of memory impairment. This difficulty may vary, with more events close to the time of memory impairment being forgotten compared to events that occurred well before the treatment.

Temporomandibular Joint: The hinge joint between the jaw (mandible) and the skull (temporal bone).

Temporoparietal Electrode Placement: Placement of one electrode over the temporal bone of the cranium and the second electrode over the parietal bone. (The temporal bone is situated near the ears. The parietal bone occupies roughly the posterior two thirds of the skull.)

Terminal Systemic Anoxia: A less than normal level of oxygen in the blood in the period preceding death.

Titrate: A term borrowed from chemistry, here used in the meaning: to adjust the strength of the electric stimulus up and down according to some strategy in order to determine the convulsion threshold.

Trauma: Physical injury by mechanical means.

Unilateral Dominant ECT: Administration of ECT with both electrodes placed over the dominant (usually the left) hemisphere of the brain.

Unilateral Electrode Placement: Placement of the electrodes so that both electrodes are on one side of the cranium, most commonly on the right side.

Unilateral Nondominant ECT: Administration of ECT with both electrodes placed over the non-dominant (usually the right) hemisphere of the brain.

Unmodified Seizures: Seizures not reduced in intensity by anaesthetic or muscle relaxant.

Vascular: Pertaining to blood vessels.

Ventilation: Artificially produced inflation and deflation of the lungs, in order to compensate for the muscle paralysis before the seizure.

Ventricles: Cavities within the brain filled with a watery fluid (cerebro-spinal fluid).

Voltage Source: A generator of electrical power in which the voltage is a specified function of time. It follows that the corresponding current from the generator depends on the load attached to it.

Voltage Time Course: The description of a voltage in terms of the values of that voltage at different points in time.

White Matter: A type of brain tissue largely filled with connecting nerve fibres and located deep within the brain.

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29. Ibid.
30. Ibid.

CHAPTER 8: CONSENT

1. Reibl v. Hughes, [1980] 2 S.C.R. 880, 14 C.C.L.T. 1, 114 D.L.R. (3d) 1, 4 L.Med. Q. 209, 33 N.R. 361; reversing (1978), 21 O.R. (2d) 14, 6 C.C.L.T. 227; affirming (1977) 16 O.R. (2d) 306, 1 L. Med. Q. 50, 78 D.L.R. (3d) 35.
2. Hopp v. Lepp, [1980] 2 S.C.R. 192, 1980 4 W.W.R. 645; reversing (1980), 22 A.R. 361, 13 C.C.L.T. 66; affirming (1979), 15 A.R. 472, 8 C.C.L.T. 260.
3. Kenny v. Lockwood, [1932] O.R. 141, [1932] 1 D.L.R. 507; reversing [1931] O.R. 438, [1931] 4 D.L.R. 906 (sub nom. Kinney v. Lockwood Clinic Ltd.).
4. Hopp v. Lepp supra n. 2, reversing (1980), 13 C.C.L.T. at 77.
5. Hopp v. Lepp supra n. 2.
6. Reibl v. Hughes supra n.1.
7. Ibid. 114 D.L.R. (3d) 1 at 16.
8. Ibid. at 17.
9. COLO. REV. STAT. #13-20-401, #13-20-402 (1984).
10. CAL. WELF. & INST. CODE #5326.2(1985).
11. AMERICAN PSYCHIATRIC ASSOCIATION. Task force report 14: electroconvulsive therapy. Washington: American Psychiatric Association, 1978.

12. NATIONAL INSTITUTES OF HEALTH. Consensus Development Conference statement: electroconvulsive therapy. Unpublished, 1985.
13. Ibid.
14. Mental Health Act, R.S.O. 1980, c.262, s.36(1).
15. Ibid.
16. Public Hospitals Act, R.S.O., 1980, c.410, Regulation 865, s.51.
17. Private Sanitaria Act, R.S.O. 1980, c. 391.
18. Supra n. 14 at s.35.
19. Supra n.5.
20. Ibid. at s.30.
21. Supra n.4.
22. Health Disciplines Act Regulation, R.R.O. 1980, Reg. 448, s.27.23.
23. Ibid. at s.35.
24. Ibid. at s.1(j).
25. Ibid. at s.35(4).
26. Wyatt v. Hardin, Civil Action 3195-N M.D. Ala. Feb. 28, 1975, modified July 1, 1975; 1 M.D.L.R. 55, 1976 - A decision of the U.S. District Court, affirmed by the Fifth Circuit Appellate Court.
27. 2 D.L.R. (4th) 234.

CHAPTER 9: RESEARCH

1. See reference (77) in Schedule "H" of this Report.

CHAPTER 10: RECOMMENDATIONS

1. Health Disciplines Act Regulation, R.R.O. 1980, Reg. 448, s.27.23.

CHAPTER 11: CHAIRMAN'S CONCLUSION

1. Health Disciplines Act, R.S.O. 1980, c.196, Part III and s.46(2).

Schedules

SCHEDULE "A"

RE T AND BOARD OF REVIEW FOR THE WESTERN REGION ET AL.

ONTARIO REPORTS

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[HIGH COURT OF JUSTICE]

Re T and Board of Review for the Western Region et al.

d VAN CAMP J.

5TH DECEMBER 1983.

Mental health — Compulsory treatment — Electroconvulsive therapy — Review board authorizing electroconvulsive therapy — Prohibited from authorizing psychosurgery — Whether treatment authorized — Mental Health Act, R.S.O. 1980, c. 262, s. 35.

e Section 35(5) of the *Mental Health Act*, R.S.O. 1980, c. 262, prohibits a review board from authorizing psychosurgery on an involuntary patient. That term is defined in s. 35(1) to mean a procedure that "removes, destroys or interrupts the continuity of histologically normal brain tissue". Apart from isolated occurrences of rare complications, electroconvulsive therapy does not have a permanent effect on nerve cell bodies, conducting tracts or the continuity of normal brain tissue, in so far as present medical research can disclose it. Therefore, such therapy does not come within the definition of psychosurgery, and a board of review has jurisdiction to authorize such treatment.

Cases referred to

g *Spooner Oils Ltd. et al. v. Turner Valley Gas Conservation Board et al.*, [1933] S.C.R. 629, [1933] 4 D.L.R. 545

Statutes referred to

Judicial Review Procedure Act, R.S.O. 1980, c. 224, s. 6(2)
Mental Health Act, R.S.O. 1980, c. 262, s. 35

h APPLICATION for judicial review of a decision of a board of review appointed under the *Mental Health Act* (Ont.).

Carla A. McKague, for applicant.

Peter M. Jacobsen, for respondent, Gary Wood, Acting Administrator of Hamilton Psychiatric Hospital.

VAN CAMP J.:—This is an application for judicial review of a decision of the board of review for the western region appointed under the *Mental Health Act*, R.S.O. 1980, c. 262, as amended, made following a hearing on October 12, 1983. The decision authorized the administration to the applicant of a form of psychiatric treatment known as electroconvulsive therapy, hereinafter called ECT.

Leave was given under s. 6(2) of the *Judicial Review Procedure Act*, R.S.O. 1980, c. 224, as amended, for this application to be made before me as a matter of urgency.

The decision of the board of review was made pursuant to s. 35(5) of the *Mental Health Act*. The applicant is an involuntary patient in a psychiatric hospital. She, her husband, brother and father had refused to consent to this treatment. She had been declared competent to give or refuse her consent. Her attending physician had applied to the board of review for an order authorizing the administration of ECT to her under the provisions of s. 35(4) which is as follows:

35(4) Where,

- (a) an involuntary patient or the nearest relative of an involuntary patient, as the case requires, refuses consent or an involuntary patient is not mentally competent and there is no relative of the patient from whom consent may be requested to the provision of a specific psychiatric treatment or a specific course of psychiatric treatment to the patient; and
- (b) the attending physician, a psychiatrist who is a member and a psychiatrist who is not a member of the medical staff of the psychiatric facility in which the patient is detained each state in the prescribed form:
 - (i) that he has examined the patient,
 - (ii) that he is of the opinion that the mental condition of the patient will be or is likely to be substantially improved by the specific psychiatric treatment or the specific course of psychiatric treatment, and
 - (iii) that the mental condition of the patient will not or is not likely to improve without the specific treatment or course of treatment,

the attending physician on notice to the patient or the nearest relative, as the case requires, may apply to the regional review board for an order authorizing the providing of the treatment or course of treatment to the patient.

The review board, appointed by the Lieutenant-Governor in Council, was composed of five members, two of whom were psychiatrists, one a barrister and solicitor, and two neither a psychiatrist nor a barrister and solicitor.

- The board of review unanimously authorized the provision of a course of not more than 15 ECT treatments following "repeat neurological examination". This authorization applies only as long as the patient remains an involuntary patient. The order expires six months from its date. The applicant had been present and represented by counsel. The board heard submissions and considered the documents filed.
- a On this application, the question is not whether ECT should be administered. The issue is whether the board of review was prevented by statute from authorizing the treatment. Section 35(5) of the *Mental Health Act* says that a regional review board:
- 35(5) ... shall not authorize and no order of the board is or shall be deemed to be authority to perform psychosurgery.
- c Nor may the involuntary patient or the nearest relative of such patient consent to psychosurgery. Psychosurgery is defined in s. 35(1) of the *Mental Health Act* as follows:
- 35(1) In this section, "psychosurgery" means any procedure that, by direct or indirect access to the brain, removes, destroys or interrupts the continuity of histologically normal brain tissue, or which inserts indwelling electrodes for pulsed electrical stimulation for the purpose of altering behaviour or treating psychiatric illness, but does not include neurological procedures used to diagnose or treat organic brain conditions or to diagnose or treat intractable physical pain or epilepsy where these conditions are clearly demonstrable.
- d The sole issue to be determined herein is whether ECT, as authorized by the regional review board, is "psychosurgery" as defined in s. 35 of the *Mental Health Act*. If so, the board of review had no power to give the authorization. The onus rests upon the applicant to prove that it is. The applicant submits that there was not present the one essential fact for the exercise of the board's jurisdiction, namely, that ECT was not psychosurgery as defined in the Act. The burden of proof thus rests upon the applicant: see *de Smith's Judicial Review of Administrative Action*, 4th ed. (1980), p. 120.
- e Before addressing the issue, it is helpful to understand what ECT is. The following are my findings from the evidence of the seven witnesses, three of whom were psychiatrists, two of whom were neurologists, one a neuro-surgeon and one a biomedical electrical engineer and professor.
- f ECT is a recognized, therapeutic, medical treatment in Canada, the United States and Great Britain. It is not a treatment for brain disease as that is commonly understood. Dr. Berry says that, if there is any suspicion of brain damage, one does not use it. It is a means of alleviating distressing symptoms.

It involves the passage of a controlled, electrical stimulus between scalp electrodes over one-half or both halves of the brain to induce a generalized seizure (*grand mal* convulsion). The precise explanation of the therapeutic mechanism is limited by the lack of knowledge of the fundamental causes of mental disorders. It is known that there is an alteration in the permeability of the blood-brain barrier, there is pituitary hormone release, and the electrolyte metabolism is affected.

ECT is an effective, if temporary, method of psychiatric treatment for a small number of psychiatric conditions, including very severe depression (especially if suicidal intent or behaviour is present), mania and acute psychotic disorders. Dr. Hoffman said that, in most psychiatric research centres, it is safer than medication for inducing a convulsion. In his opinion, it is not an unproven psychiatric treatment nor an experimental procedure and it may be for some patients the only safe and effective alternative to long-term hospitalization, suicide and chronic psychosis, resulting in an inability of the patient to care for himself. A minimum of four treatments is required and between eight to 16 treatments may be given in one course of treatment with a 48-hour interval two to three times weekly.

Dr. Berry says that there are side effects of ECT, headache and confusion, which are usually mild and last only a few hours. There is a certain memory loss. There is no memory of the treatment, of the immediate pre- and post-treatment periods. Recently acquired memories are affected. Some may be permanently lost; others recover gradually. Excessive treatment with ECT in number or frequency may result in excessive memory loss and confusion. Electroencephalographic changes occur after two to three treatments and become more extensive thereafter. The EEG usually returns to normal within three months after the course of treatment.

The use of ECT began in 1938. There have been continuing modifications to the procedure since 1955. The patient is anaesthetized prior to treatment. The muscular contractions of the convulsion are reduced by the use of a muscle relaxant. Atropine is administered to reduce the secretion of saliva and cardiac slowing. Oxygen is administered prior to and following the seizure to prevent anoxia. From the evidence of Dr. Martin, who is the psychiatrist in charge of ECT at the Clarke Institute of Psychiatry and of Dr. Hoffman, who is the Chairman of the Executive Committee of the Ontario Medical Association's section on psychiatry. I accept that this is generally the practice in

a accredited hospitals in Ontario. New machines are being developed and new types of current are being used in certain hospitals. The need for continuing study is recognized. It is obviously a treatment which requires careful appraisal of the need for it and of the patient and careful administration. There may be complications as there are in most treatments. Dr. Impastato of the New York University College of Medicine, whose research is quoted by Dr. Breggin, had said that ECT was probably the safest treatment in psychiatry, including psychotherapy. The possibility of complications must be weighed against what will happen to the patient if treatment is not given.

c Dr. Morley said that the generally accepted meaning of psychosurgery is any procedure which involves the physical destruction or anatomical interruption of brain cells or nerve fibres within the brain. The means by which this can be accomplished involves cutting, injecting, heating (by implanted electrode), ultrasound agitation and irradiating. It is a form of neuro-surgery which is used specifically for the treatment of mental or physical disorders. The original procedure was a frontal lobotomy. It involved the anatomical interruption of neuronal circuits or connections in the brain by surgical techniques which altered the gross anatomy of brain tissue which was previously histologically normal. In accepted medical parlance, ECT did not come within the category of psychosurgery. Only neuro-surgeons are permitted to perform psychosurgery in Canada whereas the administering of ECT is performed by specially qualified psychiatrists. It was probably because of this generally accepted meaning that the board of review did not consider whether it had jurisdiction to authorize the treatment. It was not asked to. Consequently, the opinion of the seven witnesses was not before it.

g The issue is not whether ECT comes within that generally accepted meaning, but rather whether it comes within the definition of psychosurgery in the statute. That definition is not ambiguous. It must be remembered that there is the basic right to remain untouched by others as stated in *Spooner Oils Ltd. et al. v. Turner Valley Gas Conservation Board et al.*, [1933] S.C.R. 629 at p. 638, [1933] 4 D.L.R. 545 at p. 552, and by Driedger in his text *The Construction of Statutes* (1974), pp. 138-9. A statute should be construed not to prejudicially affect rights unless the language expressly requires. If a statute is reasonably susceptible of two meanings in the absence of any other conclusive indication of intent, the court may act on the assumption that the Legis-

lature did not intend to disturb existing rights. Section 35 shows the intent to permit interference with that basic right and defines when it may be done.

The question reduces itself to whether ECT is a procedure that removes, destroys or interrupts the continuity of histologically normal brain tissue. Not all medical people are in agreement on the answer as is shown by the evidence before me. It has remained a subject of controversy, although those witnesses from Ontario whose evidence was adduced are in agreement in their opinions from their varied experience and study that ECT does not remove, destroy or interrupt the continuity of the tissue. Dr. Sament, a practising neurologist, is of the contrary opinion. There have been referred to him for neurological evaluation and EEG a considerable number of patients who had a past history of ECT. Dr. Breggin is opposed to the use of ECT because it does destroy the brain tissue. He has read widely and written on the subject. He has not admitted anyone for ECT since 1969 nor seen more than three to four patients both before and after ECT in the last ten years. He carries on the general practice of psychiatry and treats a wide range of patients.

The evidence in support of a finding that ECT destroys brain tissue is as follows. Three main studies of animals, conducted between 1946 and 1952, found a pattern of damage in many of the animals to whom ECT had been applied. The pattern included neuronal cell death, multiple small haemorrhages to surrounding blood vessels in the brain and connective tissue reactions (glial reactions). The animal studies varied but each of the three studies had used the minimal necessary amount of electricity to create a convulsion. Each had protected the animals' heads from damage and each mimicked as closely as possible clinical conditions as found then in the treatment of human patients. Each had used controls and each had used a lesser degree of current intensity than was routinely used in many or most courses of ECT treatments in humans at that time.

It was the opinion of Hartelius, who is recognized by Dr. Martin as one of the more sound in his methodology, that the question of irreversible damage to nerve cells must be answered in the affirmative. He said that it was not extensive, it was found in only a small minority and where the largest series of treatments had been given.

These were animal studies and not studies of humans. They were made before any modifications in the treatment had been made. Dr. Berry pointed out that they had been administered

a under different conditions. The animals had been subjected to an unusually large number of seizures and uncontrolled as to actual oxygen deprivation and other factors. There is to be considered the small size of some of the animals, the thickness of the skulls and other differences. However, Professor Kunov says that one way to compare whether excess current was used on the animals is to consider the least amount that was needed to produce convulsions and, in his opinion, it may be that the convulsive threshold is the same in the animal and the human. One of the studies would seem to indicate that it used a smaller voltage than is currently used. Dr. Berry in stating that there had been a large number of seizures had relied upon studies made by a Dr. Kendell of Great Britain, for whom he had great respect, who had found no reports of damage unless there had been a large number of shocks in a short time. But the Hartelius study at least was one in which the number of shocks and the time had been reasonable. However, there remains the question of how appropriate it is to use these studies of animals to show the results on humans.

d Human autopsy studies following ECT produced pathological findings that corresponded with the animal studies. With respect to the deaths of humans following treatment, a study by Dr. Impastato in 1957 of 214 reported fatalities and 40 unreported had found 66 which had died from cerebral causes, in 16 of which there was found haemorrhage, thrombosis and necrosis. Of these, eight had no pre-existing cause and 11 had had four or fewer shock treatments. Only about one-third had received oxygen so the lack of oxygen could be one reason for the result.

f Another reason is that patients then were given ECT who now would be unacceptable risks because of other illnesses, including intracranial pathology. One of the deceased had struck his head several weeks before. There is also the difference in the techniques of administering ECT at that time such as two or three given in succession within a few minutes which could introduce more electricity into the brain than was necessary.

g Dr. Berry said that, although neuropathologists in all of the institutes and teaching hospitals are examining brains at autopsy, some of which had ECT, there was no indication that these changes have been found under modern techniques. No organized study of the effects on the brain of modified ECT seems to have been made, but if this same pattern had continued, one would have expected a neuropathologist to report. Dr. Hoffman said that there had never been a death at the Clarke Institute.

h Dr. Berry's opinion is that the pattern is the typical pattern of findings when there has been anoxia damage to the brain.

As an indication of damage in humans, Dr. Breggin asks one to look at the EEG readings. Usually, the abnormal readings last for less than three months. Occasionally, they are found up to ten months. Dr. Breggin had said that some studies showed that they had lasted permanently although he was not able to give any specific reference. If so, it would not be proof of brain change by itself, but it is suggestive of damage.

Another indication of damage is said to arise from the study of 41 elderly depressives in 1980 by Calloway and Dolan who found a significant association between cerebral atrophy and prior ECT. It was not an unequivocal association. The study was only an *ad hoc* study. The researchers thought that there should be a more detailed investigation.

Another test was cited of cingulotomy patients in 1977, a number of whom had had prior ECT and who had remote memory loss. Again, there is the problem that the number of treatments was unknown; the ECT may have been unmodified; patients could be seriously ill; and, some patients may have differed in some way that affected test performance.

The impaired memory, which is found in some of the patients, is also said to be a sign of brain damage. There is retrograde amnesia but it reverses generally in a few weeks. A study by Janis found some evidence of longer lasting effect from premodified ECT. Dr. Breggin had two cases among his own patients where there had been permanent memory loss. Dr. Hoffman had agreed that such permanent loss could be an indication of brain impairment, but Dr. Breggin said that memory loss could be biochemical and not necessarily proof of destruction or interruption of continuity of tissue.

The short-term memory loss remains in spite of the modification of the treatment and even though unilateral instead of bilateral application and non-dominant instead of dominant is used.

The cause of the long-term side effects has not been clarified by the studies that have been made. Dr. Berry agrees that the cause must still be speculative. It is his opinion that anoxia is the most likely cause and the use of oxygen now meets that problem. However, counsel for the applicant points to other causes of these long-term effects indicating brain damage for which the modifications have found no answer.

One cause could be what is called pump failure, an overload of the ventricle when the blood flow is inadequate to meet the demands of the cells and ischaemic injury to the cells may follow. Hyperoxygenation does alleviate.

The summary of the foregoing is that study is needed of the effect of the administering of ECT in Ontario under its present form. What has been put before me is either speculation or possibilities. The wide-ranging investigation that has been done of the research, reports and editorial comment over the years in other countries by those who have done original research and others, does not, either in any one respect or cumulatively, provide proof that ECT destroys or interrupts the continuity of normal brain tissue. It is not sufficient to say that each of animal research, human autopsy studies, EEG, the study of electrical current, leaves unanswered some questions. A collection of uncertain possibilities does not lead to a positive conclusion.

The research cited is of methods which have changed. It leaves unanswered questions which are necessary to an analysis of it. The researchers themselves have not drawn the conclusion that the applicant asks this court to draw. I recognize that, in their scientific caution, the researchers have not closed the door, but their conclusions are adverse. It may be that the questions they raise will inspire other researchers who may find the answers. But at the moment, the material is not sufficient to lead to the conclusion of permanent damage to brain cells or the continuity of normal brain tissue.

Of the different experts who gave their opinions, I preferred the report of Dr. Berry. It seemed to me that he was more impartial, that he was not espousing one position or the other, that he had, from his own personal experience and from his studies, endeavoured with an open mind to find the answer to this question. After a consideration of the other opinions, and his opinion tested by cross-examination, I accept his opinion that "apart from the isolated occurrence of extremely rare complications, properly administered electroconvulsive therapy does not have any permanent effect on nerve cell bodies, conducting tracts or the continuity of normal brain tissue" in so far as present medical research can disclose it.

Since ECT does not then come within the definition of psychosurgery, the board of review had jurisdiction to authorize the treatment. The application is dismissed. It does not seem to me a matter for costs, but counsel may speak to me.

Application dismissed.

Another cause could be intracranial hypertension and the rupture of a vessel wall.

- a Another possible cause of any long-term side effects is the permeability of the blood-brain barrier. The interface between the circulation and the brain, which normally prevents intervascular components from reaching the brain, such as protein or medication or chemical components, may deteriorate and toxic psychosis may result.
- b Atropine is commonly used to minimize the common cardiac arrhythmia. Atropine is one of the substances which can cross the barrier and cause toxic psychosis and is likely to do so when the patient is using some commonly available drugs. One can reduce the chances of atropine crossing the barrier if one uses another type of anti-cholinergic, but even those are more likely to cross as the barrier becomes more permeable. It is recognized that the same pattern of damage occurs in some toxic states, but it is not known now what is the effect of a toxic shock caused by atropine crossing the barrier.
- c Another cause of the pattern of the change in the brain could arise from abnormal metabolism instead of from hypoxia. If some of the substances essential to metabolism become depleted, there will probably be a dysfunction until repletion. At some point, the process may become irreversible, but at the moment it is only speculative. It is only a possibility.
- d There is also the question of whether the pattern of damage that is perceived could be the direct result of the electric current itself rather than the convulsion. The convulsion is generalized throughout the brain whereas the damage is localized and proportionate to the intensity and duration of flow of the current and to the number of shocks. It was the opinion of Professor Kunov that, although any damage would decrease as the density of current decreased, there could be no threshold, no point where there would be no damage. The modifications of ECT have achieved a reduction in energy by the use of the pulse wave machine, although less than ten hospitals have such a machine.
- e Professor Kunov was of the opinion that even the reduction thus achieved would not be sufficient to prevent any damage. He thought that the study by Corsellis and Meyer in 1953 was too cautious when it said that the slender findings did not provide evidence that the current could be the cause of atrophy after noting that Hartelius had found the direct deleterious effect of the current negligible in therapeutic dosage. Dr. Berry said the current excited the neurons but did not harm the cells. Dr. Morgan said it caused no interruption of continuity of tissue. The reason for the attempted reduction was to minimize the short-term side effects.

SCHEDULE "B"

QUESTIONNAIRES TO HOSPITALS

The ECT Review Committee requested information from hospitals as outlined in the covering letter. Questionnaire I elicited information on policies and procedures. Questionnaire II requested statistics on the use of ECT.

ELECTRO-CONVULSIVE THERAPY REVIEW COMMITTEE

101 Bloor Street West
14th Floor
Toronto, Ontario
M5S 1P7
416-965-1006

November 9, 1984

Dear

As you are aware, the Minister of Health for the Province of Ontario has established the Electro-convulsive Therapy Review Committee to investigate the use of ECT in the province of Ontario. The Terms of Reference are:

1. Examine and analyze the use of ECT in the province (past and present) including but not limited to:
 - o Number of patients receiving ECT as a function of status, age, sex, diagnosis, source of consent
 - o Number of treatments per patient per admission
 - o Written procedures outlining criteria and standards.
2. Examine the medical, legal, and ethical issues surrounding the use of ECT.
3. Recommend, based on available research and expert knowledge, guidelines for the future use of ECT in Ontario including when, how, why, and if such treatment should be ordered.
4. Recommend directions for future research and study.

If the Committee is to meet its Terms of Reference, it is of the utmost importance to obtain data concerning the use of ECT in Ontario over the past several years. Recognizing the difficulty of this task, the Committee has selected four fiscal years - 1977/78, 1979/80, 1981/82, and 1983/84 and has formulated two sets of questionnaires - one on Policy and Procedures and one on Statistics to be sent to all facilities listed under the Mental Health Act.

With respect to the Questionnaire on Statistics, the Committee has developed a Standard Form to be used in conjunction with this questionnaire. One Form should be used for each patient (both in-patients and out-patients) who has received ECT in any of these four years.

Felice M. R. Guberman and Cynthia Ledgley will be available to provide any clarification or answer any questions that you may have regarding the questionnaires. The office number is (416) 965-1006 and you may reverse the charges.

We would appreciate receiving this data by February 28, 1985.

Thank you for your co-operation and assistance.

Yours very truly,

Charles J. Clark, Q.C.
Chairman

I. - POLICIES AND PROCEDURES

- 1a. Does your facility administer ECT? Yes ☐ No ☐
- b. Did you facility administer ECT in 1977/78, 1979/80, 1981/82, 1983/84?
2. If your facility does not administer ECT, do you refer patients to another facility for ECT? If so, is there a policy for such referrals and to which facility are such patients referred?
3. What type of equipment was used in the administration of ECT in 1977/78, 1979/80, 1981/82, 1983/84 (fiscal years)? When was it purchased? Please provide the model, serial number, name of manufacturer and name of the distributor for each unit. Who maintains and calibrates the equipment? How often is this done?
4. What is the prescribed clinical procedure to follow for administering ECT in your facility? If there is none, please let us know.
5. Does this procedure include routine administration of pre-medication (eg., atropine)?
6. Is an anaesthetic given? Is a muscle relaxant used? Are these administered by a specialist in anaesthesia? Is an anaesthetist present during the administration of ECT? Is a physician skilled in procedures such as intubation present?
7. Are patients routinely oxygenated before the treatment?
8. Is there a policy regarding the frequency (how many times per week) and the number of treatments per course of ECT? Is ECT prescribed by "course" or by individual treatments?
9. Are there any requirements regarding pre-examination, such as EKG and laboratory tests that are done regardless of the patient's clinical status?
10. Is the treatment given by the patient's physician or someone else? Does your facility allow practitioners other than psychiatrists to administer ECT? Are psychiatric residents permitted to administer ECT? If so, is the Supervisor immediately present or only present in the hospital?
11. What procedure is followed to adjust the stimulus to induce the seizure? Do you adjust the intensity of the current and/or voltage, the wave form, and/or the duration of the stimulus?
12. Is there a policy regarding the continuation of other forms of biological treatment designed to treat the patient's primary condition at the time the patient is receiving a course of ECT? What symptomatic treatments may be continued (e.g., neuroleptic (antipsychotic) drugs, benzodiazepine anxiolytics or hypnotics, other sedatives and hypnotics)?
13. Under what circumstances is a second psychiatric consultation required?
14. Does a signed consent cover a course of treatment for a particular stay in hospital or an individual treatment (both in-patient and out-patient)?

15. Is the consent a specific consent for ECT?
16. Is there a policy regarding continued treatment with ECT if the patient or the person giving consent on behalf of the patient changes his/her mind?
17. Is there a policy for monitoring the patient after the course of treatments? If so, what is this policy? For what period of time is the patient monitored after receiving ECT? What aspects of the patient are monitored following treatments, i.e., EEG changes, behavioural changes, etc?
18. Is any printed information distributed to patients prior to obtaining consent for ECT outlining the risks and benefits?
19. Is there a policy allowing family members to be present during the administration of ECT?

If there is any printed or written material pertaining to the use of ECT in your facility, could you please forward a copy to us.

II. - STATISTICS

General Statistics

For each of the fiscal years, 1977/1978, 1979/1980, 1981/1982, and 1983/1984, please provide (for both in-patients and out-patients):

1. The total number of psychiatric patients admitted in the fiscal year.
2. The number of informal and involuntary psychiatric patients in the facility.
3. The total number of male and female psychiatric admissions in the facility.
4. The number of psychiatric patients in the facility classified by the following age groups: 0-14, 15-19, 20-34, 35-49, 50-64, over 65.

Statistics specific to ECT

For each psychiatric patient (in-patient and out-patient) first admitted in one of the fiscal years, 1977/1978, 1979/1980, 1981/1982, or 1983/1984 who received ECT, please fill out a copy of the attached form. One form should be completed for each subsequent admission or out-patient registration. Please staple together all forms pertaining to one patient in chronological order. Check off the appropriate response. In some instances, it may be necessary to check off more than one item.

ECT PATIENT INFORMATION SHEET

1. Year of Admission 1977/78 ____ 1979/80 ____ 1981/82 ____ 1983/84 ____
2. In-patient ____ Out-patient ____
3. Year of Birth (fill in correct year) _____
4. Sex: Male ____ Female ____
5. Status on Admission: Involuntary ____ Informal ____
6. Change in Status during this Admission: Yes ____ No ____ Both ____
If yes, indicate if change was
a) Informal to involuntary ____ or
b) Involuntary to Informal ____
7. History of Previous ECT Treatment (in any institution) Yes ____ No ____ Unknown ____
8. Previous Psychotherapy, Psychosurgery or Drug Therapy for psychiatric disorder:
a) Psychosurgery
b) Psychotherapy
c) Drug Therapy
 i) at least two weeks prior to ECT ____
 ii) less than two weeks prior to ECT ____
9. Total number of attempts at seizure induction during this admission: _____
10. Total number of successful induced seizures during this admission: _____
11. Type of Treatment:
a) Bilateral ____
b) Unilateral ____
c) Both ____
- 12a. Reasons for Treatment according to ICD-9 terms: (check off more than one if necessary)
a) Depression ____
b) Mania or Hypomania ____
c) Schizophrenia:
 i) less than two years duration ____
 ii) more than two years duration ____
d) Restraint ____
e) Other (please specify) _____

- b. Clinical features noted in chart:
(check off more than one
if necessary)

- a) Retardation of thinking _____
b) agitation _____
c) delusions _____
d) suicidal behaviour making
imminent improvement
urgent _____
e) medical illness making
treatment with anti-
depressants undesirable _____
f) evidence of acute aggressive
or violent behaviour _____
g) refusal of continued therapy
or continued
hospitalization _____

13. Discharge (for in-patients only)

- a) Home or independent living
with no follow-up _____
b) Another facility _____
c) Out-patient treatment _____
d) Other treatment
(please specify) _____

14. Consent to ECT check more than one
if necessary:

- a) Not recorded _____
b) Patient gave oral
consent _____
c) patient gave written
consent _____
d) Next-of-kin gave oral
consent _____
e) Next-of-kin gave written
consent _____
f) Regional Review Board _____
g) No consent _____
h) Other (please specify) _____

15. Patient competent to give consent:

Yes _____ No _____
Not Noted on Chart _____

.....

ALTERNATIVE

16. ECT used for restraint

Yes _____ No _____

a) If yes, circumstances show:

- a) overt evidence of acute aggressive, violent or suicidal behaviour etc.
- b) some evidence of acute aggressive, violent or suicidal behaviour etc.
- c) refusal of alternate therapy or continued hospitalization
- d) other _____

b) Nature of consent or Authority:

- a) patient written
- b) patient oral
- c) next-of-kin written
- d) next-of-kin oral
- e) Regional Review Board
- f) no expressed consent

c) Other forms of restraint attempted prior to ECT:

- a) pharmaceutical
- b) physical
 - 1. straps
 - 2. posey restraint or jackets
 - 3. secure facilities such as locked rooms
 - 4. other _____
- c) other _____

SCHEDULE "C"

HOSPITAL QUESTIONNAIRES: DISTRIBUTION AND RESPONSEDISTRIBUTIONRESPONSE

	<u>I. Policy & Procedures</u>	<u>II. Statistics</u>
Alexandra Marine and General Hospital, Goderich	X	X
Baycrest Hospital, Toronto	X	X
Belleville General Hospital		
The Brantford General Hospital	X	X
Brockville Psychiatric Hospital	X	X
Cambridge Memorial Hospital	N/A*	N/A
Carleton Place and District Memorial Hospital		
Chedoke-McMaster Hospitals, Hamilton		X
Children's Hospital of Eastern Ontario, Ottawa		
Clarke Institute of Psychiatry, Toronto	X	X
Community Mental Health Service, Bracebridge	N/A	N/A
Cornwall General Hospital		
Etobicoke General Hospital, Toronto		
Greater Niagara General Hospital, Niagara Falls	X	

* N/A (not applicable) indicates those institutions which replied that ECT is not administered in their facilities.

DISTRIBUTIONRESPONSE

I. Policy &
Procedures II. Statistics

Hamilton General Hospital		
Hamilton Psychiatric Hospital	X	X
Henderson General Hospital, Hamilton	X	X
Hogarth Westmount Hospital, Thunder Bay	N/A	N/A
Homewood Sanitarium Limited, Guelph		X
L'Hôpital Général d'Ottawa		
Hôpital Montfort, Ottawa		
Hospital for Sick Children, Toronto	N/A	N/A
Hotel Dieu Hospital, Kingston	X	X
Hotel Dieu of St. Joseph, Windsor		
Humber Memorial Hospital, Weston		X
Institute of Psychotherapy Limited, Kingston	X	X
Joseph Brant Memorial Hospital, Burlington	X	
Kingston General Hospital	X	X
Kingston Psychiatric Hospital	X	X
Kitchener-Waterloo Hospital		X
Lake of the Woods District Hospital, Kenora	N/A	N/A
Lakehead Psychiatric Hospital, Thunder Bay	X	X
London Psychiatric Hospital	X	X
McKellar General Hospital, Thunder Bay	X	X
Mental Health Centre, Penetanguishene	X	X
Metropolitan General Hospital, Windsor	X	
Mississauga Hospital		
Mount Sinai Hospital, Toronto	X	X
North Bay Psychiatric Hospital		X

DISTRIBUTIONRESPONSE

	<u>RESPONSE</u>	
	<u>I. Policy & Procedures</u>	<u>II. Statistics</u>
North York Branson Hospital, Toronto	X	
North York General Hospital, Toronto	X	X
Northwestern General Hospital	X	
Oakville-Trafalgar Memorial Hospital		
Ongwanada Hospital, Kingston	N/A	N/A
Oshawa General Hospital	X	
Ottawa Civic Hospital	X	
Owen Sound General and Marine Hospital	X	X
Peel Memorial Hospital, Brampton		
Pembroke General Hospital		
Peterborough Civic Hospital	X	
Plummer Memorial Public Hospital, Sault Ste. Marie		
Public General Hospital, Chatham	X	
Queen Street Mental Health Centre, Toronto	X	X
Queensway General Hospital, Toronto	X	X
Queensway-Carleton Hospital, Ottawa		
Royal Ottawa Hospital		
Royal Victoria Hospital of Barrie		
Sarnia General Hospital		
Scarborough General Hospital, Toronto	N/A	N/A
South Muskoka Memorial Hospital, Bracebridge		
St. Catharines General Hospital	X	
St. Joseph's Health Centre, Toronto	X	X
St. Joseph's Hospital, Hamilton		
St. Joseph's Hospital, London		
St. Mary's General Hospital, Timmins	X	X

DISTRIBUTIONRESPONSE

	I. Policy & Procedures		II. Statistics	
St. Michael's Hospital, Toronto	X			
St. Thomas Psychiatric Hospital	X		X	
Stratford General Hospital	X		X	
Sudbury Algoma Hospital	X		X	
Sudbury General Hospital of the Immaculate Heart of Mary			X	
Sunnybrook Medical Centre, Toronto				
Sunnyside Private Hospital Limited, Toronto				
Toronto East General and Orthopaedic Hospital				
Toronto General Hospital				
Toronto Western Hospital	X			
University Hospital, London				
Victoria Hospital, London				
Welland County General Hospital	X			
The Wellesley Hospital, Toronto	X			
Whitby Psychiatric Hospital	X		X	
Windsor Western Hospital Centre	X		X	
Women's College Hospital, Toronto	X		X	
Woodstock General Hospital	X		X	
York Central Hospital, Richmond Hill	X		X	
York County Hospital, Newmarket				
York-Finch General Hospital, Toronto	N/A		N/A	

SCHEDULE "D"

NEWSPAPER NOTICES

Notices inviting submissions to the ECT Review Committee appeared in English and French in daily newspapers across Ontario in September and December of 1984.

E.C.T. REVIEW NOTICE

Charles J. Clark, Q.C., has been appointed by the Honourable Keith C. Norton, Minister of Health for Ontario, as Chairman of the Electroconvulsive Therapy Review Committee. This committee will study the use of electroconvulsive therapy in Ontario and make recommendations for future guidelines and research.

The committee is interested in hearing in writing from any persons who have experience with or views regarding the use of E.C.T. Letters may be written in English or French and will be treated confidentially if so requested.

The deadline for submissions from the public has been extended to December 15, 1984. Address submissions to:

Charles J. Clark, Q.C.
Chairman
Electroconvulsive Therapy
Review Committee
101 Bloor Street West
14th Floor
Toronto, Ontario
M5S 1P7

Ministry of Health
 **Ontario**
Keith C. Norton, Minister

AVIS RELATIF À L'EXAMEN DE L'EMPLOI DE L'ÉLECTROCHOC

L'honorable Keith C. Norton, ministre de la Santé de l'Ontario, a nommé M^e Charles J. Clark, c.r., au poste de président du comité d'examen de l'emploi de l'électrochoc. Ce comité étudiera l'emploi de l'électrochoc en Ontario et présentera ses recommandations sur les directives futures d'administration de ce traitement et les recherches à effectuer.

Le comité est désireux de recevoir des présentations écrites de personnes qui se sentent, directement ou indirectement intéressées par cette thérapeutique ou qui ont des opinions à exprimer à ce sujet. Les communications peuvent être formulées en français ou en anglais, et seront traitées confidentiellement sur demande.

La date limite de présentation des communications du public a été prorogée au 15 décembre 1984. Veuillez les envoyer à

M^e Charles J. Clark, c.r.
Président
Comité d'examen de
l'emploi de l'électrochoc
101 ouest, rue Bloor
14^e étage
Toronto (Ontario)
M5S 1P7

Ministère de la Santé
 **Ontario**
Keith C. Norton, ministre



SCHEDULE "E"

**INSTITUTIONS, ORGANIZATIONS AND ASSOCIATIONS WHICH MADE
WRITTEN SUBMISSIONS**

Advocacy Committee, Canadian Mental Health Association, Windsor Essex Branch
American Psychiatric Association (Ontario Branch)
Auto-Psy (Autonomie Psychiatisés, Independence for Psychiatric Patients),
Quebec
BeschwerdeZentrum Psychiatrie, Bonn, West Germany
Brant County District Health Unit
Canadian Bar Association
Canadian Civil Liberties Association
Canadian Mental Health Association, Kingston Branch
Centre for Research and Education in Human Services, Kitchener
Chedoke-McMaster Hospitals, Hamilton
Citizens Commission on Human Rights
City of York Board of Health
Cochrane District Health Unit
Community Advisory Board, St. Thomas Psychiatric Hospital
Depressives Associated, United Kingdom
Dr. med Mabuse, Frankfurt, West Germany
Hamilton Psychiatric Hospital
Homewood Sanitarium Limited, Guelph
International Psychiatric Association for the Advancement of Electrotherapy,
Oakland, California, U.S.A.
Irren-Offensive e.V., Berlin, West Germany
Kitchener-Waterloo Hospital
Labour Council of Metro Toronto
McMaster University, Hamilton
The Mississauga Hospital
Ontario Association of Children's Mental Health Centres
Ontario Association of Professional Social Workers
Ontario Coalition to Stop Electro Shock

Ontario Medical Association
Ontario Mental Health Foundation
Ontario Psychiatric Association
Oshawa General Hospital
Ottawa Civic Hospital
Patientenfront, Ludwigshafen, West Germany
People Against Psychiatric Oppression, Cincinnati, Ohio, U.S.A.
Psychiatric Community Association of Timmins
Psychiatric Patient Advocate Office, Ministry of Health Program
Queensway General Hospital, Toronto
Queensway-Carleton Hospital, Ottawa
Recovery Inc., Paris, Ontario
Registered Nurses' Association of Ontario
Royal Ottawa Hospital
Scarborough Centenary Hospital, Toronto
St. Catharines General Hospital
St. Joseph's Hospital, Hamilton
St. Joseph's Hospital, Thunder Bay
Sudbury Algoma Hospital
Toronto Board of Health
Toronto East General and Orthopaedic Hospital
Toronto General Hospital
Vancouver Mental Patients' Association
Victoria House, Kitchener, Ontario
The Wellesley Hospital
Windsor Western Hospital
Woodstock General Hospital
York County Hospital, Newmarket

SCHEDULE "P"

QUESTIONNAIRE TO INDIVIDUALS

A questionnaire was sent to individuals who had made a submission to the ECT Review Committee, as outlined in the covering letter.

ELECTRO-CONVULSIVE THERAPY REVIEW COMMITTEE

101 Bloor Street West
14th Floor
Toronto, Ontario
M5S 1P7
416-965-1006

Dear

The Public Interest Subcommittee of the Electro-Convulsive Therapy Review Committee has asked that I write to you and other individuals making submissions to the Committee to ask if you will provide them with further information that will be helpful to them in analyzing the views expressed in those submissions.

The Subcommittee would like to know, for example, whether particular submissions come from people who have personally undergone ECT or had someone close to them undergo it, as well as other information to help them understand the background and perspective of those writing to us. We realize that some, or even most, of the information requested may already be contained in your letter, along with other useful and relevant statements, but it would be very helpful if you would take a few minutes to complete the enclosed questionnaire and return it as quickly as possible.

If more than one person among your family and close friends has had ECT, we would like you to fill out a separate questionnaire for each person. We are enclosing one questionnaire; if you need more than one, you may photocopy it, or simply submit a separate sheet of paper lettered "A" to "Z" with the answers about each additional person. If you prefer, you may ask us to send you additional copies of the questionnaire.

We look forward to receiving your completed questionnaire or questionnaires.

Yours very truly,

CODE

QUESTIONNAIRE FOR INDIVIDUAL SUBMITTORS
TO ECT REVIEW COMMITTEEPlease circle the number corresponding to your answer

- | | | | |
|----|---|--------|---|
| 1. | Have you <u>personally</u> received ECT? | Yes | 1 |
| | | No | 2 |
| 2. | Has a <u>family member</u> or <u>close friend</u> received ECT? | Yes | 1 |
| | | No | 2 |
| 3. | What is your sex? | Male | 1 |
| | | Female | 2 |
| 4. | What is your present age? | 10-19 | 1 |
| | | 20-29 | 2 |
| | | 30-39 | 3 |
| | | 40-49 | 4 |
| | | 50-59 | 5 |
| | | 60-69 | 6 |
| | | 70-79 | 7 |
| | | 80-89 | 8 |

- | | | | |
|----|--|-------------------|---|
| 5. | What is your <u>overall</u> view of ECT? | strongly positive | 1 |
| | | positive | 2 |
| | | neutral | 3 |
| | | negative | 4 |
| | | strongly negative | 5 |
| | | not sure | 0 |
| 6. | Do you believe further research is needed into ECT? | Yes | 1 |
| | | No | 2 |
| | | No opinion | 0 |
| 7. | Do you believe further public education is needed about ECT? | Yes | 1 |
| | | No | 2 |
| | | No opinion | 0 |
| 8. | Do you believe the use of ECT is justified in some circumstances? | Yes | 1 |
| | | No | 2 |
| | | Not sure | 0 |
| 9. | Do you believe the use of ECT <u>without the patient's consent</u> is justified in some circumstances? | Yes | 1 |
| | | No | 2 |
| | | Not sure | 0 |

If your answer was "yes", under what circumstances do you believe ECT should be used without the patient's consent? (You may wish to consider, among other things, whether the patient is competent to make treatment decisions, what the family's wishes are, whether the patient is likely to cause harm to self or others, and the possibility that the patient may refuse to make a decision.)

COMPLETE THE REST OF THIS QUESTIONNAIRE

ONLY IF YOU, A FAMILY MEMBER OR A CLOSE FRIEND HAS HAD ECT.

If more than one person among you, your family members and close friends has had ECT, PLEASE COMPLETE A SEPARATE QUESTIONNAIRE FOR EACH PERSON. You do not need to repeat your answers to questions 1 to 9; just start at question 10 and do a separate set of answers for each person who underwent ECT. If we have not sent you sufficient copies of the questionnaire, you may either:

- (a) photocopy the required pages from this questionnaire;
- or
- (b) use blank paper, and write down the question numbers and your answers.

On each questionnaire, if you or the other person you are telling us about has had MORE THAN ONE COURSE OF ECT (a course includes several treatments given over a short period of time), please tell us as much as you can about each course, beginning with the earliest one. We have provided four columns, to cover four courses of ECT. If the person has had more than four courses of ECT, attach a separate sheet of paper with as many more columns as you need, heading them "5th", "6th", etc. Write down the question numbers and put your answers in the appropriate column.

If you do not know the exact answer to certain questions (such as age or number of treatments), please give us your best estimate. If you do not know an answer even approximately, please mark "not known" so we can tell that you were unable to answer, rather than having accidentally skipped the question.

REMEMBER TO DO A SEPARATE QUESTIONNAIRE FOR EACH PERSON YOU ARE TELLING US ABOUT, BEGINNING WITH QUESTION 10.

10. What is the person's sex?

Male	1
Female	2

11. What is the person's present age?

10-19	1
20-29	2
30-39	3
40-49	4
50-59	5
60-69	6
70-79	7
80-89	8
deceased	9
not known	0

REMEMBER TO USE A SEPARATE COLUMN FOR EACH COURSE OF ECT
GIVEN TO THE PERSON. IGNORE THE COLUMNS YOU DON'T NEED.

12. What was the person's age when the ECT
was given?

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
10-19	1	1	1	1
20-29	2	2	2	2
30-39	3	3	3	3
40-49	4	4	4	4
50-59	5	5	5	5
60-69	6	6	6	6
70-79	7	7	7	7
80-89	8	8	8	8
not known	0	0	0	0

		<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
13.	What type of ECT was given to the person?				
	modified (with anaesthetic and drugs)	1	1	1	1
	unmodified (without anaesthetic and drugs)	2	2	2	2
	not known	0	0	0	0
14.	In what year was the ECT given?				
	before 1940	3	3	3	3
	1940-1949	4	4	4	4
	1950-1959	5	5	5	5
	1960-1969	6	6	6	6
	1970-1979	7	7	7	7
	1980 or later	8	8	8	8
	not known	0	0	0	0
15.	Approximately how many treatments were there in the course?				
	1-6	1	1	1	1
	7-12	2	2	2	2
	13-18	3	3	3	3
	19-24	4	4	4	4
	over 24	5	5	5	5
	not known	0	0	0	0

16. What was the person's diagnosis?	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
depression	1	1	1	1
schizophrenia	2	2	2	2
manic depression	3	3	3	3
other	4	4	4	4
not known	0	0	0	0

If you answered "other" for any course,
what was the diagnosis?

1st

2nd

3rd

4th

17. In what circumstances did the person have the ECT?

as an outpatient	1	1	1	1
as an inpatient in a hospital	2	2	2	2
as a prison inmate	3	3	3	3
not known	0	0	0	0

18. ANSWER ONLY IF THE PERSON WAS AN INPATIENT IN
A HOSPITAL.

What was the person's legal status?

informal (in hospital voluntarily and free to leave)	1	1	1	1
involuntary ("committed" and not able to leave)	2	2	2	2
Warrant of the Lieutenant Governor (charged with a criminal offence, and found either <u>unfit to stand trial</u> or <u>not guilty by reason of insanity</u>)	3	3	3	3
not known	0	0	0	0

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
19. How many times had the person been hospitalized for psychiatric reasons <u>up to and including</u> the admission during which ECT was given?				
0 (treated as outpatient <u>only</u> and not hospitalized before or during this course of treatment)	1	1	1	1
1 (treated during <u>first</u> hospitalization)	2	2	2	2
2 to 4	3	3	3	3
more than 4	4	4	4	4
not known	0	0	0	0

20. During the admission during which ECT was given, what other treatments (such as psychotherapy, drugs, or behaviour modification) were tried before ECT?

no other treatment	1	1	1	1
<u>only</u> drugs	2	2	2	2
<u>only</u> treatments other than drugs	3	3	3	3
drugs <u>and</u> other treatments	4	4	4	4
not known	0	0	0	0

If treatments other than drugs were tried during any admission, what were the treatments?

1st

2nd

3rd

4th

		<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
21.	Did the person consent <u>personally</u> to having ECT?				
	Yes	1	1	1	1
	No	2	2	2	2
	not known	0	0	0	0

22. ANSWER ONLY IF THE PERSON CONSENTED PERSONALLY.

Did the person feel pressured in any way into consenting?					
Yes	1	1	1	1	
No	2	2	2	2	
not known	0	0	0	0	

23. ANSWER ONLY IF THE PERSON DID NOT CONSENT PERSONALLY.

Who gave consent to the ECT?

a family member	1	1	1	1
a review board	2	2	2	2
someone other than a family member or a review board	3	3	3	3
no one	4	4	4	4
not known	0	0	0	0

If your answer for any course was "someone other than a family member or a review board", who gave consent?

1st

2nd

3rd

4th

		<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
24.	Looking back later, did the person feel that he or she was given enough information about ECT <u>before</u> having the treatment?				
	Yes	1	1	1	1
	No	2	2	2	2
	not known	0	0	0	0
25.	Did ECT help the person's condition?				
	Yes, greatly	1	1	1	1
	Yes, to some extent	2	2	2	2
	Yes, slightly	3	3	3	3
	No	4	4	4	4
	not known	0	0	0	0
26.	Did ECT cause <u>temporary</u> memory loss?				
	Yes, extensive	1	1	1	1
	Yes, moderate	2	2	2	2
	Yes, slight	3	3	3	3
	No	4	4	4	4
	not known	0	0	0	0
27.	Did ECT cause <u>long-lasting</u> memory loss?				
	Yes, extensive	1	1	1	1
	Yes, moderate	2	2	2	2
	Yes, slight	3	3	3	3
	No	4	4	4	4
	not known	0	0	0	0

28. Did ECT have any harmful effects <u>other than memory loss?</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
Yes, serious	1	1	1	1
Yes, moderate	2	2	2	2
Yes, slight	3	3	3	3
No	4	4	4	4
not known	0	0	0	0

If any course of ECT had any harmful effects
other than memory loss, what were the
harmful effects?

1st

2nd

3rd

4th

THANK YOU FOR YOUR HELP.

YOU MAY ADD ANY COMMENTS YOU HAVE ON THE REST OF THIS PAGE.

SCHEDULE "G"

SUMMARY OF SCIENTIFIC LITERATURE ON THE STRUCTURAL EFFECTS OF ECT ON THE BRAIN

Methods Used to Assess Possible Brain Damage

The structural effects of ECT on the brain have been studied using a number of approaches:

1. Experimental animal models of ECT
2. Examination of human post-mortem tissue.
3. Experimental animal models of epilepsy.
4. Other studies:
 - i) Computerized tomography of the brain.
 - ii) Studies of blood brain barrier permeability.
 - iii) Biochemical studies.

1. Experimental Animal Models of ECT

Using a wide variety of animal models, a number of investigators have reported pathological changes in the brains of their experimental subjects. Other investigators have reported the absence of the same pathological changes.¹⁻¹⁶ The reported changes (or their absence) were as follows:

- . Changes in blood vessels. The range of changes included: altered calibre and blood content of small blood vessels; small haemorrhages in the brain or subarachnoid space; hemosiderin pigment in perivascular spaces (representing older small haemorrhages); and evidence of changed blood vessel permeability (leaky vessels).
- . Gliosis. Reported less frequently.
- . Nerve cell changes. These included: pale staining nerve cells thought by some investigators to represent reversible changes; acute nerve cell death; nerve cell loss; and larger areas of nerve cell devastation.

Almost all of the animal experimentation attempting to duplicate the effects of ECT was conducted more than 30 years ago, shortly after ECT was introduced as a therapeutic modality.

ECT technique differed among the experimental animal models in the following factors:

- . Strength of current applied to the brain.
- . Duration of stimulus.
- . Number and frequency of applications.

- . Size and placement of electrodes.
- . Species of experimental animals.

Divergences of results may largely be attributed to these differences in technique. The results of different experimental studies cannot be directly compared.

The majority of these early animal model studies on ECT can be criticized on some or all of the following counts:

- a) Variables which were not controlled in these experiments included the following:
 - . Nutrition of animal.
 - . Trauma to the head during the seizures.
 - . Maintenance of oxygenation during the seizures.
 - . Cardiovascular support during the seizures.

Many of the changes seen in previous experimental studies (prior to 1944) were interpreted by Alexander and Löwenbach¹⁷ to be a result of these factors.

- b) ECT as practised at the time of these experiments and duplicated by the experimental models differed from that universally practised today in:
 - . Absence of hyperoxygenation.
 - . Lack of muscle relaxation.

For this reason, none of the early experimental results are directly comparable with ECT as practised today.

- c) The methods of tissue recovery and preparation employed by most investigators took little account of the possibility of the creation of artifacts. While some of the changes described in nerve cells are clearly indicative of cell death, other changes appear from the illustrations to represent artifacts. Other changes described in these early studies would not be accepted by present day neuropathologists as indicative of cell death and are of uncertain significance. While they may represent nerve cell damage it is not clear that they indicate that nerve cell death would inevitably follow.
- d) To be valid as a model for ECT an animal experiment must achieve a density of current comparable to that achieved in human ECT. Any experimental animal has a brain of different size and shape and a skull of different thickness and shape when compared to the human brain. These factors affect current density. Since the density of current in brain tissue is extremely difficult to measure, the current density in brain tissue is not known with precision either in human ECT or in experimental animal models. The experimental animal models may therefore not be comparable to human ECT.

Of all the early experimental studies, that of Hartelius¹⁸ is by far the most careful and reliable. He reviewed all previous experimental studies, and used an experimental design with careful use of control animals and careful tissue processing techniques to avoid artifacts. He concluded that in animals treated with ECT there were changes in blood vessels, acute cerebral edema, gliosis and

nerve cell changes, some of which were irreversible. His experiment shared the problems common to animal models and his procedure is not comparable to modified ECT as practised in the 1980s.

Three more recent controlled studies on experimental animals have been published, and the results are noteworthy.

That of Westerlain and Plum¹⁹ used a stimulus greater than that necessary to produce a seizure daily for 10 days on both immature and mature rats. While the mature rats showed no changes, including no nerve cell loss or decrease in nerve cell size or brain weight, the immature rats showed reduced brain protein synthesis. The study is of interest in view of the fact that the size of stimulus used was considerably greater than that used for ECT. The study suggests that the immature brain may be more susceptible to ECT than the mature brain and has implications for the use of ECT in children.

A second study by Colon and Notermans²⁰ was carried out using three weekly convulsions for four weeks on mature rats with sacrifice twelve weeks later. They found no evidence of nerve cell loss but did find a reduction in the average volume of nerve cell nuclei. The long term significance of this finding is unclear since the changes may represent a reversible phenomenon.

A third study by Dam et al.²¹ used three daily seizures up to a total of 140 seizures with sacrifice two weeks after the final seizure. The study was concentrated on the hippocampus, a brain structure involved in memory and often the site of damage in severely epileptic patients. There was no evidence of nerve cell loss in the hippocampus. The importance of this study lies in the high rate of administration and large number of seizures, greatly exceeding the rate and numbers given in contemporary ECT usage.

The absence of evidence of permanent damage to the mature brain in these three more recent studies is noteworthy, since the experiments were well controlled and the histological techniques of high quality. An additional margin of safety of modified ECT is suggested by the fact that the above experiments all employed unmodified seizures.

2. Human Post-Mortem Studies

Studies of human post-mortem material have been reported in patients who died either as a result of ECT or of unrelated disease shortly after receiving ECT. Brain findings have ranged from normal to a multitude of diverse abnormalities.

A review of 38 human cases reported to that date was made by Madow in 1956.²² Vascular changes including haemorrhages were present in 17 and were the most common change. Eight cases showed nerve cell changes and nine showed gliosis.

Of the deaths reported, 40 per cent were considered to be due to, or markedly influenced by, the cerebral complication. Significant diseases of heart, blood vessels and kidneys were present in many cases and may have contributed significantly to the brain findings. Madow suggested that the fact that neuropathological changes occur in fatalities following ECT does not necessarily indicate that similar findings occur in all patients so treated. He further suggested that the presence of cardiac, vascular or renal disease may predispose a person to cerebral injury with ECT. With modern anaesthetic management, these diseases are seldom unrecognized or untreated prior to the administration of ECT.

In many reported fatal cases, brain abnormalities can readily be attributed to terminal systemic anoxia, cardiac arrhythmia or cardiovascular collapse. These conditions are unlikely to cause brain damage or to prove fatal with modern anaesthetic management. In other cases, the brain findings are readily attributed to pre-existing disease such as hypertension or cerebral atherosclerosis. Few uncomplicated cases have been reported where these factors have been excluded. One such report is that by Corsellis and Meyer²³ of two cases who had each received numerous courses of ECT over several years. They reported:

- . Slight fibrosis of the walls of small cerebral arteries.
- . Gliosis of the marginal layer of the cerebral cortex and brainstem, around the ventricles and around small blood vessels in the white matter.

Corsellis and Meyer concluded that the changes were similar to those seen in the brains of some epileptic patients and thus attributable to seizure activity rather than the electric current. They were unable to document focal or diffuse nerve cell loss. This negative observation does not exclude the possibility that nerve cell loss has been caused by ECT since, as indicated earlier, slight diffuse loss of neurons is extremely difficult to detect by neuropathological techniques.

3. Experimental Animal Models of Epilepsy

At ECT, there is an initial stimulus in which electric current is passed through the brain, and an ensuing seizure. The potential for brain damage is present in both of these phases. Since the ECT seizure is analogous to a spontaneous epileptic seizure, the results of experimental animal models of epilepsy are relevant to the question of brain damage with ECT.

A number of models of epilepsy have been studied in various animal species. However, that of Meldrum²⁴ is representative. He examined several models of modified and unmodified chemically induced seizures in baboons and showed no nerve cell loss with continuous unmodified seizures of up to 82 minutes, or with continuous modified seizures of up to three hours. He also showed no nerve cell loss following a series of one-hour or two-hour modified seizures up to a total seizure time of eleven hours, although some gliosis was seen in the latter group.

The lessening of brain damage with modification of the seizure by the addition of muscle paralysis is significant and suggests that such modification of the ECT seizure lessens the likelihood of brain damage.

The above results should be compared with the average seizure length in human ECT of less than one minute.

4. Other Studies

Other approaches to the question of brain injury with ECT have been made by means of:

- i) Computerized tomography of the brain.
- ii) Blood brain barrier studies.
- iii) Biochemical studies.

i) Computerized Tomography(CT) of the Brain

Of the studies utilizing computerized tomography, the following are noted:

Calloway²⁵ compared the CT scans of 22 elderly patients who had received ECT with those of age matched controls. While the study was considered to be preliminary, the findings suggested some connection between ECT and cerebral frontal atrophy. They recommended further studies with larger numbers of patients including those in younger age groups where atrophy of frontal lobes due to age-related degenerative disease would be less likely. In this study, the patients were matched for age but not for other factors that may have influenced the result.

In a subsequent study, Kendell and Pratt²⁶ reported the CT scan findings of twelve patients, comparing scans done before ECT and at various intervals thereafter, and comparing the side to which ECT was administered to the contralateral side. They concluded that there was no atrophy of the brain attributable to ECT.

ii) Blood Brain Barrier (BBB) Studies

For over 40 years, brain capillary permeability has been known to be increased by ECT, and the penetration of solutes across the BBB enhanced. A study by Bolwig et al.²⁷ in 1976 demonstrated that the changes in permeability to small molecules during a single ECT seizure were similar to those during hypercapnea (excess of carbon dioxide in the blood). They demonstrated a rise in cerebral blood flow (CBF) of 120 per cent during seizures, similar to that produced by hypercapnea, and suggested that increased CBF and not the electric current or the seizure was responsible for the permeability change. Whether such a change in permeability is injurious is not certain. A number of studies^{28,29} using repeated seizures have shown increased permeability to large molecules which might prove injurious to the brain. However, such injurious effect has not been proved.

Still other studies³⁰ have shown that myelin basic protein, a structural protein of the brain which tends to show levels in the blood corresponding to the degree of damage of the brain in trauma and stroke, was not measurably changed in the blood following ECT.

iii) Biochemical Studies

ECT causes biochemical changes in brain tissue, cerebrospinal fluid and blood, some of which are short lived and probably related to the stress of the convulsion, while others are of longer duration and may possibly be of therapeutic relevance.³¹ Some of the observed biochemical changes may be related to breakdown of the blood brain barrier and are discussed separately under that heading. Other changes are:

- Altered Protein Synthesis. While the structural basis and mechanisms of memory are to a large extent unknown, there is some suspicion that memory and normal protein synthesis (production of protein by brain cells) are somehow related. Memory loss with ECT might be expected to be associated with alterations in protein synthesis in brain tissue. ECT was found by Dunn³² to interfere with protein synthesis. Whether this was a result of the passage of the electric current or of the seizure was not clear. The effect was transient and thus not clearly indicative of structural brain damage.

- Neuroendocrine Effects. That ECT directly affects the hypothalamus has been recognized since 1949. More recently the release of pituitary hormones has been studied and it is clear that ECT causes release of adrenocorticotrophic hormone (ACTH), growth hormone, prolactin, gonadotropins and antidiuretic hormone. In general, these returned rapidly to normal and are not considered to be indicative of brain damage.
- Neurohumoral Effects. After ECT, blood levels of a number of neurotransmitters are increased including norepinephrine dopamine and serotonin. Since some of these changes are long lasting (up to six weeks), it has been suspected that these changes may be related to the therapeutic efficacy of ECT. There is nothing to indicate that the increased levels of these neurotransmitters reflect structural brain damage.

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SCHEDULE "H"

POSITION PAPER ON ELECTRO-CONVULSIVE THERAPY OF THE ONTARIO MEDICAL ASSOCIATION AND THE ONTARIO PSYCHIATRIC ASSOCIATION

This 1984 position paper entitled Electro-Convulsive Therapy: Contemporary Standards of Practice was submitted to the ECT Review Committee by the Ontario Medical Association and the Ontario Psychiatric Association. The following excerpted material comprises sections X, XI and XII, as well as the reference section of the original document.

X. EQUIPMENT AND PERSONNEL

1. Electroconvulsive Therapy

(i) Stimulus Generators: Electrical Energy of the Waveform

The electrical induction of a grand mal seizure is dependent upon the passage through the brain of electrical energy sufficient to recruit enough neurons, discharging in synchrony, to exceed the seizure threshold. Convulsions induced with a stimulus just sufficient to exceed the threshold are equally effective therapeutically to those induced with stimuli greatly in excess of that minimum. (10) Hence, the minimum amount of electrical energy necessary to induce a convulsion should be used. As previously noted, any reduction below that minimum is subconvulsive and not therapeutic.

The amount of electrical energy required to reach the seizure threshold for any given patient may vary considerably depending upon the waveform of the electric stimulus. Convulsions may be induced with "clipped" sine and pulsatile square waves requiring, on average, much lower electrical energy than the conventional sine wave stimulus. (78) Energy reduction is achieved by a perpendicular rise and/or fall in stimulus amplitude to maximize the amount of energy transmitted at the peak amplitude.

In order to ensure that the minimum effective stimulus is used, updated ECT instruments should generate a discontinuous pulsatile waveform rather than a continuous sine wave. The energy reduction is associated with decreased side effects of the procedure. The benefit obtained by reducing the electrical energy transmitted to patients offsets the reported difficulty encountered in reaching the seizure threshold. (79) The stimulus parameters and electrode position may be adjusted to obviate this difficulty. (see The Procedure)

All instruments must be CSA approved and be serviced periodically to ensure that the stimulus is generated according to the manufacturer's specifications.

(ii) Monitoring the Convulsion

Since the grand mal convulsion is the only demonstrable therapeutic variable of the procedure, its absence may be designated a treatment failure. Therefore, the seizure must be witnessed adequately to ensure that it is generalized rather than focal. An observable bilateral peripheral motor response after the stimulus has ceased is necessary to confirm engagement of both cerebral hemispheres. Because of the bilateral cortical innervation of the facial nerve fibres to the

forehead muscles, bilateral forehead and periorbital muscle contractions should not be interpreted as signs of a generalized seizure. Bilateral clonic motor activity below this level must be observed. In this regard, it should be noted that the single-channel EEG included in some ECT instruments may not permit the differentiation of a generalized from a focal motor seizure such that the muscle contractions must be observed.

(iii) Personnel

ECT is administered in Ontario by physicians licenced by the College of Physicians and Surgeons of Ontario. Psychiatric residents may administer the treatment under the direct supervision of a psychiatrist. Those giving the treatment should be knowledgeable of its indications, contraindications, and adverse effects and be trained in the technical aspects of its administration.

Nursing staff should also be knowledgeable of the treatment and trained to assist in its application and the management of post-treatment recovery and complications.

2. Anaesthesia

(i) Equipment

Anaesthetic machines must meet modern standards of circuit design for an adequate flow of oxygen and for the ventilation of the temporarily paralyzed patient. Electro-cardiographic monitoring during the procedure should be available. Resuscitation equipment should include a cardiac defibrillator, laryngoscope and endotracheal tubes, suction pump, intravenous cut-down tray and infusion sets, and a complete resuscitation drug supply. A general anaesthetic is contraindicated in the absence of immediately available resuscitation equipment.

(ii) Personnel

Anaesthesia for ECT is administered in Ontario by physicians licenced by the College of Physicians and Surgeons of Ontario. Those giving the anaesthetic should be knowledgeable of the potential complications and trained in the technical administration of the anaesthetic, endotracheal intubation, and cardiopulmonary resuscitation.

XI. THE PROCEDURE

1. Pre-Treatment Protocol

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(ii) Medical Investigations

This protocol for the medical investigation and management of all in-patients and out-patients referred for ECT is intended as a screen for those intercurrent conditions which may contraindicate ECT or necessitate precautions.

1) A complete physical examination or internal medicine consultation within 14 days of starting ECT. Should ECT be prescribed for a patient many weeks after hospital admission, a physical examination must be repeated.

- 2) Hemoglobin, white cell count, differential and urinalysis within 7 days before the first treatment and electrolytes when clinically indicated.
- 3) EKG for all patients over 40 years of age and where clinically indicated.
- 4) Chest and spinal x-rays as clinically indicated. Cervical spine x-rays of all patients with a history of rheumatoid arthritis.
- 5) Sick cell screening by "Sickle Quik" test for all patients at risk. (A sickling crisis may be precipitated by hypoxia during anaesthesia.)
- 6) For patients receiving lithium carbonate, a serum lithium level prior to the treatment and twice weekly as long as the combination of ECT and lithium is used.
- 7) Monoamine oxidase inhibitors discontinued a full 14 days prior to the first treatment.

2. Orders and Reassessment

Physicians' orders for ECT should be renewed after every 4 treatments or more frequently if clinically indicated. For patients receiving maintenance ECT with an interval between treatments longer than 2 weeks, a new order should be written for each treatment. Psychiatric assessment of the response to treatment and the need for its continuation should be made at intervals of no more than every three or four treatments, including those for maintenance or prophylactic ECT. Adverse side effects should be monitored following each treatment.

3. Anaesthesia

Anaesthesia is induced with a bolus of thiopental (usual dose range between 100 and 250 mgm) or methohexital sodium. Methohexital has been reported to cause fewer cardiac irregularities during ECT than pentathol but the clinical significance of the irregularities may be less than the adverse effects of methohexital. (86) Minimum effective dosages are used since barbiturates raise the seizure threshold. Muscle relaxation is produced with succinylcholine chloride (usual dose range between 30 and 60 mgm). Atropine (usual dose range between 0.3 and 0.6 mgm) may be used to prevent bradycardia. Optimal muscle relaxation permits mild contractions of the distal muscles of the extremities and face such that the seizure can be readily observed. Teeth are protected with a mouth bite. Patients are ventilated with 100% oxygen prior to seizure induction and following the seizure until spontaneous respiration resumes. The anaesthetic and neuromuscular blocker dosages are adjusted according to the patient response at each successive treatment.

4. Stimulus Electrode Placement

Reviews of the literature conclude that unilateral electrode placement over the non-dominant cerebral hemisphere is equally as effective to and produces less postictal memory loss and confusion than bilateral placement. (1,5,8,9,19,20) Therefore, unilateral placement is recommended as the routine. Since 90% of the population is left hemisphere dominant, right unilateral placement is used. Screening for handedness and dominance may be used, particularly if patients experience more acute memory loss than expected after the initial treatments.

Some patients who are refractory to unilateral ECT appear responsive to bilateral ECT and this has been confirmed recently. (87) These patients do not fall into any single diagnostic or other descriptive category and there is no way of predicting treatment response in advance. If there is a clear history of a differential response, treatment should be initiated with or changed to bilateral placement. Otherwise, unilateral placement remains the initial method of choice with a change to bilateral as necessary.

The greater difficulty encountered in inducing a seizure with pulsatile stimuli and unilateral electrode placement may be a function of interelectrode distance but this needs to be confirmed. (88) Temporoparietal placement may be preferable to frontotemporal. Adequate electrode contact is necessary to reduce impedance at the skin-electrode interface.

5. Electric Stimulus Parameters

The electrical stimulus should be adjusted so as to just exceed the seizure threshold for each successive treatment. This may be done by selecting a mid-range and titrating upwards or downwards depending upon the response. If a bilateral seizure does not occur, the stimulus is increased and repeated up to twice more if necessary. Since the seizure threshold increases with age, higher stimulus settings are usually required in the geriatric population. The glissando technique of gradually increasing the stimulus amplitude should not be used since it only adds to the energy required. (78,79)

6. Frequency of Treatment

Treatments should be given three times per week as the routine. The literature to date does not indicate a better or faster therapeutic effect with more frequent treatment. Clinical trials of the effectiveness of daily or twice daily ECT for the initial few treatments for severely ill patients have not been done. At present, such clinical use must rest on clinical judgement with careful assessment and dosage reduction as soon as possible to minimize side effects.

Attempts to speed recovery with the technique of inducing several seizures during a single period of anaesthesia (89) can not be recommended since the adverse effects outweigh any clinical advantages. The technique of "regressive" or "depatterning" ECT with the intent to induce a severe amnesic/confusional state is not acceptable clinical practice.

7. Number of Treatments per Course

Some rudimentary standards for the dosage of ECT have been developed. In this regard, the specification of maximum dosages is essential for the identification of refractory patients for whom treatment should be suspended pending a complete reassessment of diagnosis and management. A recent authoritative review specifies an upper limit of 12 treatments for affective symptoms with discontinuation suggested after 8 treatments if no improvement has occurred. (5) The most comprehensive and balanced review of this practice standard was undertaken by the Task Force on Electroconvulsive Therapy of the American Psychiatric Association (APA). (19) Its report suggests an upper limit of 15 treatments per course for affective disorders, except under unspecified "unusual" circumstances. The literature does not suggest a maximum dosage for mania.

The literature contains numerous references to the requirement for long courses of ECT for schizophrenia. However, there is a paucity of methodologically sound studies examining this issue. Most of the reports are unacceptable with respect to experiment design, case selection, diagnostic criteria, and outcome measures. It appears that the recommendation for very long courses of treatment have been based on the results in cases of chronic schizophrenia. In addition, in the early reports the patients would not have had ancillary treatment with neuroleptics. The APA report underscores the paucity of data to support any dosage recommendation for schizophrenia. Nevertheless, a maximum of 25 to 30 treatments was suggested. It is essential to note that these figures are derived exclusively from the results of a study of "regressive" ECT in a group of chronic or "process" schizophrenics. This work has not been validated and the procedure is not acceptable by contemporary standards. Kendell has concluded that the widespread clinical belief in high dosage ECT for schizophrenia is based on nothing more substantial than majority opinion. (5)

In view of actual clinical practice in which much lower dosages are now used to treat schizophrenia, the guidelines in the literature for the maximum dosage may well be too liberal and may encourage over-zealous treatment. (77) Certainly, the scientific rationale for this standard is suspect. At present, it seems reasonable to recommend a maximum dosage of 15 treatments per course for all disorders with a complete review of the diagnosis and management of all cases considered in need of further treatments. This guideline should also apply to treatment courses followed by maintenance or prophylactic ECT.

8. Seizure Duration

The seizure duration may be an important variable in predicting clinical response. However, the relationship remains unclear since a number of variables (level of oxygenation, electrode placement, anaesthetic dosage, intercurrent medications, treatment stage) influence seizure duration. (11,90,91) Nevertheless, since the series of grand mal convulsions is the therapeutic variable, the cumulative seizure duration may be a more accurate measure of dosage than their total number per course. (11,92) Seizure duration should be recorded for each treatment since very brief seizures (i.e. less than 20 seconds) may be one reason for a delay in response. (93) This should be considered in assessing the need for further treatments.

9. Recovery Room Procedure

Patients must be constantly attended by nursing staff until fully recovered from the anaesthetic. Out-patients should be accompanied home by a responsible adult or be required to remain under observation for three to four hours after each treatment. Vital signs should be monitored after the treatment and before transfer from the recovery room.

10. Prevention of Relapse

Although the natural history of depression and acute schizophrenic episodes may be shortened with effective treatment with ECT and/or pharmaceuticals, relapse is common. Therefore, the need for maintenance antidepressants or neuroleptics should be assessed following each course of ECT.

XII. MAINTENANCE AND IMPROVEMENT OF STANDARDS OF PRACTICE

Further research is necessary to determine why induced convulsions are therapeutic and to refine the clinical indications for ECT, particularly for patients with severe mania and schizophrenia who are unresponsive to adequate dosages of neuroleptics and for maintenance/prophylactic ECT. The treatment dosage, as measured by the number of treatments per course and by cumulative seizure duration, needs to be investigated further so that patients are not under- or over-treated. Similarly, there remain unanswered questions regarding the stimulus electrode position. Evidence must be sought for any permanent adverse side effects of ECT as presently administered. The legal and psychiatric aspects of competency to consent require further study.

Every effort must be made to ensure that ECT is prescribed and administered in Ontario according to optimum standards of clinical practice. Those standards may evolve from methodologically sound research, the results of which may shape practice patterns. Alternatively, the prevailing clinical practice may simply be designated as the accepted standard. This is particularly true when there is a paucity of well-designed research and/or if the findings are not sufficient to outweigh the clinical impressions of most practitioners. This certainly is the case with the practice of ECT in which significant issues concerning the indications and therapeutic dosage either have not been investigated or have been with poorly designed studies. Certainly there is good reason to question the rationale for some presently recommended standards. (77) Therefore, they must be under constant review in light of new knowledge to obviate their perpetuation as absolutes or as ideals without consideration of the exigencies of clinical practice.

There is a pressing need to develop a system for the collection of descriptive statistical data on the use of ECT throughout Ontario. This information is essential not just to monitor practice patterns but also to facilitate clinical research with the objective of providing better treatment. A model for such a system is already available in Ontario. (76) The beneficial effect on clinical practice of such data collections has been described. (46)

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SCHEDULE "T"

ONTARIO LEGISLATION ADMINISTERED BY THE MINISTRY OF HEALTH

The following are excerpts from the Mental Health Act, the Public Hospitals Act, the Mental Hospitals Act and the Health Disciplines Act.

MENTAL HEALTH ACT

R.S.O. 1980, c.262, as amended by 1981, c.66, Schedule; 1983, c.75; and 1984, c.11, s.194.

1. In this Act,

.....

- (c) "involuntary patient" means a person who is detained in a psychiatric facility under a certificate of involuntary admission or a certificate of renewal;

.....

- (g) "mentally competent" means having the ability to understand the subject-matter in respect of which consent is requested and able to appreciate the consequences of giving or withholding consent;

.....

- (j) "nearest relative" means

- (i) the spouse who is of any age and mentally competent, or
- (ii) if none or if the spouse is not available, any one of the children who has attained the age of majority and is mentally competent, or
- (iii) if none or if none is available, either of the parents who is mentally competent or the guardian, or
- (iv) if none or if neither is available, any one of the brothers or sisters who has attained the age of majority and is mentally competent, or
- (v) if none or if none is available, any other of the next of kin who has attained the age of majority and is mentally competent.

.....

- (p) "psychiatric facility" means a facility for the observation, care and treatment of persons suffering from mental disorder, and designated as such by the regulations;

.....

- (t) "restrain" means keep under control by the minimal use of such force, mechanical means or chemicals as is reasonable having regard to the physical and mental condition of the patient.... R.S.O. 1980, c.262, s.2.

.....

4. Every psychiatric facility has power to carry on its undertaking as authorized by any Act, but, where the provisions of any Act conflict with the provisions of this Act or the regulations, the provisions of this Act and the regulations prevail. R.S.O. 1980, c.262, s.4

.....

8. Any person who is believed to be in need of the observation, care and treatment provided in a psychiatric facility may be admitted thereto as an informal patient upon the recommendation of a physician.

9. (1) Where a physician examines a person and has reasonable cause to believe that the person,

- (a) has threatened or attempted or is threatening or attempting to cause bodily harm to himself;
- (b) has behaved or is behaving violently towards another person or has caused or is causing another person to fear bodily harm from him; or
- (c) has shown or is showing a lack of competence to care for himself,

and if in addition the physician is of the opinion that the person is apparently suffering from mental disorder of a nature or quality that likely will result in,

- (d) serious bodily harm to the person;
- (e) serious bodily harm to another person; or
- (f) imminent and serious physical impairment of the person,

the physician may make application in the prescribed form for a psychiatric assessment of the person.

- (2) An application under subsection (1) shall set out clearly that the physician who signs the application personally examined the person who is the subject of the application and made careful inquiry into all of the facts necessary for him to form his opinion as to the nature and quality of the mental disorder of the person.

- (3) A physician who signs an application under subsection (1),

- (a) shall set out in the application the facts upon which he formed his opinion as to the nature and quality of the mental disorder;
- (b) shall distinguish in the application between the facts observed by him and the facts communicated to him by others; and

- (c) shall note in the application the date on which he examined the person who is the subject of the application.
- (4) An application under subsection (1) is not effective unless it is signed by the physician within seven days after he examined the person who is the subject of the examination.
- (5) An application under subsection (1) is sufficient authority for seven days from and including the day on which it is signed by the physician,
 - (a) to any person to take the person who is the subject of the application in custody to a psychiatric facility forthwith; and
 - (b) to detain the person who is the subject of the application in a psychiatric facility and to restrain, observe and examine him in the facility for not more than 120 hours. R.S.O. 1980, c.262, s.9.

.....

- 13. Subject to subsection 14(5), the attending physician may change the status of an informal patient to that of an involuntary patient by completing and filing with the officer in charge a certificate of involuntary admission. R.S.O. 1980, c.262, s.13.
- 14. (1) The attending physician, after observing and examining a person who is the subject of an application for assessment under section 9 or who is the subject of an order under section 26,
 - (a) shall release the person from the psychiatric facility if the attending physician is of the opinion that the person is not in need of the treatment provided in a psychiatric facility;
 - (b) shall admit the person as an informal patient if the attending physician is of the opinion that the person is suffering from mental disorder of such a nature or quality that the person is in need of the treatment provided in a psychiatric facility and is suitable for admission as an informal patient; or
 - (c) shall admit the person as an involuntary patient by completing and filing with the officer in charge a certificate of involuntary admission if the attending physician is of the opinion both that the person is suffering from mental disorder of a nature or quality that likely will result in,
 - (i) serious bodily harm to the person,
 - (ii) serious bodily harm to another person, or
 - (iii) imminent and serious physical impairment of the person,unless the person remains in the custody of a psychiatric facility and that the person is not suitable for admission as an informal patient.

(2) The physician who completes a certificate of involuntary admission pursuant to clause (1)(c) shall not be the same physician who completed the application for psychiatric assessment pursuant to section 9.

(3) The officer in charge shall release a person who is the subject of an application for assessment under section 9 or who is the subject of an order under section 26 upon the completion of 120 hours of detention in the psychiatric facility unless the attending physician has released the person, has admitted the person as an informal patient or has admitted the person as an involuntary patient by completing and filing with the officer in charge a certificate of involuntary admission.

(4) An involuntary patient may be detained, restrained, observed and examined in a psychiatric facility,

(a) for not more than two weeks under a certificate of involuntary admission, and

(b) for not more than,

(i) one additional month under a first certificate of renewal,

(ii) two additional months under a second certificate of renewal, and

(iii) three additional months under a third or subsequent certificate of renewal,

that is completed and filed with the officer in charge by the attending physician.

(5) The attending physician shall not complete a certificate of involuntary admission or a certificate of renewal unless, after he has examined the patient, he is of the opinion both,

(a) that the patient is suffering from mental disorder of a nature or quality that likely will result in,

(i) serious bodily harm to the patient,

(ii) serious bodily harm to another person, or

(iii) imminent and serious physical impairment of the patient,

unless the patient remains in the custody of a psychiatric facility; and

(b) that the patient is not suitable for admission or continuation as an informal patient.

(6) An involuntary patient whose authorized period of detention has expired shall be deemed to be an informal patient.

(7) An involuntary patient whose authorized period of detention has not expired may be continued as an informal patient upon completion of the prescribed form by the attending physician.

(8) Forthwith following completion and filing of a certificate of involuntary admission or of a certificate of renewal, the officer in charge or his delegate shall review the certification documents to ascertain whether or not they have been completed in compliance with the criteria outlined in this Act and where, in his opinion, the documents are not properly completed, the officer in charge shall so inform the attending physician and, unless the person is re-examined and released or admitted in accordance with subsection (1) and (2), the officer in charge shall release the person. R.S.O. 1980, c.262, s.14.

.....

30. (1) The Lieutenant Governor in Council may appoint a review board for any one or more psychiatric facilities.
 - (2) A review board shall be composed of three or five members, at least one and not more than two of whom are psychiatrists and at least one and not more than two of whom are barristers and solicitors and at least one of whom is not a psychiatrist or a barrister and solicitor.
 - (3) The Lieutenant Governor in Council may designate one of the members of a review board as chairman.
 - (4) The Lieutenant Governor in Council may appoint alternate members to a review board, and, where for any reason a member cannot act, the alternate member appropriate to comply with subsection (2) shall act in his stead.
 - (5) An officer or servant of, or a person with a direct financial interest in, a psychiatric facility shall not act as a member of a review board when the case of a patient of that facility is being reviewed.
 - (6) A member shall hold office for the period, not to exceed three years, specified in his appointment, but is eligible for reappointment at the expiration of his term of office.
 - (7) A psychiatrist and a barrister and solicitor and another member who is not a psychiatrist or a barrister and solicitor constitute a quorum, and the decision of a majority is the decision of the review board. R.S.O. 1980, c.262, s.30.
-
- 30a. (1) An attending physician who completes a certificate of involuntary admission or a certificate of renewal shall give or transmit a notice in writing of completion and filing of the certificate to the patient who is the subject of the certificate and to the area director for the area, in accordance with the Legal Aid Act, in which the psychiatric facility is located.
 - (2) A notice under subsection (1) shall inform the patient and the area director that the patient or any person on his behalf is entitled to a hearing by the regional review board if the patient or the person gives or transmits to the officer in charge or the regional review board notice in writing requiring a hearing and the patient or the person may so require such a hearing. R.S.O. 1980, c.262, s.66.

31. (1) An involuntary patient, or any person on his behalf, may apply in the prescribed form to the chairman of the regional review board having jurisdiction to inquire into whether the patient is suffering from mental disorder of a nature or quality that likely will result in,
- (a) serious bodily harm to the patient;
 - (b) serious bodily harm to another person; or
 - (c) imminent and serious physical impairment of the patient,
- unless the patient remains an involuntary patient in the custody of a psychiatric facility.
- (2) An application under subsection (1) may be made,
- (a) when a certificate of involuntary admission respecting the patient comes into force;
 - (b) when any certificate of renewal respecting the patient comes into force; or
 - (c) when the patient, after having been admitted to a psychiatric facility, is subsequently continued as an involuntary patient.
- (3) An application under subsection (1) may be made at any time by the Minister, the Deputy Minister or the officer in charge in respect of any involuntary patient.
- (4) On the completion of a fourth certificate of renewal and on the completion of every fourth certificate of renewal thereafter, the patient shall be deemed to have applied in the prescribed form pursuant to subsection (1) to the chairman of the regional review board having jurisdiction. R.S.O. 1980, c.262, s.31.

.....

- 33a. Where a patient or other person gives or transmits to the officer in charge a notice in writing pursuant to subsection 30a(2), the officer in charge shall transmit the requirement to the regional review board. R.S.O. 1980, c. 262, s. 67, part.
- 33b. A regional review board that received notice in writing requiring a hearing under subsection 30a(2) or under section 33a shall appoint a time and place for and hold the hearing. R.S.O. 1980, c. 262, s. 67, part.
- 33c. Within seven days from the day that a regional review board completes a hearing under section 33b, the board by an order in writing shall confirm or revoke the certificate of involuntary admission or the certificate of renewal and for the purpose the board may substitute its opinion for that of the attending physician. R.S.O. 1980, c. 262, s. 67, part.

33d. (1) A party to a proceeding shall be afforded an opportunity to examine and to copy, before the hearing, any written or documentary evidence that will be produced or any report, the contents of which will be produced or any report, the contents of which will be given in evidence at the hearing.

(2) Subject to section 29, a party to a proceeding or the counsel or agent representing the party, or both, is entitled to examine and to copy any clinical record prepared in respect of the patient. R.S.O. 1980, c.262, s.67, part.

33e. (1) Members of a regional review board holding a hearing shall not have taken part before the hearing in any investigation or consideration of the subject-matter of the hearing and shall not communicate directly or indirectly in relation to the subject-matter of the hearing with any person or with any party or his representative except under notice to and opportunity for all parties to participate, but the regional review board may seek legal advice from an adviser independent from the parties and in such case the nature of the advice shall be made known to the parties in order that they may make submissions as to the law.

(2) No member of a regional review board shall participate in a decision of a regional review board pursuant to a hearing unless he was present throughout the hearing and heard the evidence and argument of the parties and, except with the consent of the parties, no decision of a regional review board shall be given unless all members so present participate in the decision.

(3) The findings of fact of a regional review board pursuant to a hearing shall be based exclusively on evidence admissible or matters that may be noticed under sections 15 and 16 of the Statutory Powers Procedure Act.

(4) Documents and things put in evidence at the hearing shall, upon the request of the person who produced them, be released to him by the regional review board within a reasonable time after the matter in issue has been finally determined. R.S.O. 1980, c.262, s.67, part.

33f. (1) A party to proceedings before a regional review board may appeal from its decision in accordance with the rules of court to the county or district court of the county or district in which is located the psychiatric facility where the patient is detained.

(2) Where a party appeals from a decision or order of a regional review board, the regional review board shall forthwith file in the county or district court the record of the proceedings before it in which the decision was made, which shall constitute the record in the appeal.

(3) An appeal under this section may be made on questions of law or fact or both.

(4) On an appeal under this section, the court may exercise all the powers of the regional review board.

(5) For the purpose of subsection (4), the court may substitute its opinion for that of the attending physician or of the regional review board.

(6) On an appeal under this section, the court may refer the matter back to the regional review board for rehearing, in whole or in part, in accordance with such directions as the court considers proper. R.S.O. 1980, c.262, s.67, part.

.....

35. (1) In this section, "psychosurgery" means any procedure that, by direct or indirect access to the brain, removes, destroys or interrupts the continuity of histologically normal brain tissue, or which inserts indwelling electrodes for pulsed electrical stimulation for the purpose of altering behaviour or treating psychiatric illness, but does not include neurological procedures used to diagnose or treat organic brain conditions or to diagnose or treat intractable physical pain or epilepsy where these conditions are clearly demonstrable.

(2) Psychiatric treatment shall not be given to an involuntary patient without the consent of the patient or, where the patient has not reached the age of majority or is not mentally competent, the consent of the nearest relative of the patient except under the authority of an order of a regional review board made on the application of the officer in charge.

(3) The consent of an involuntary patient or the nearest relative of an involuntary patient to treatment while an involuntary patient does not include and shall not be deemed to include psychosurgery.

(4) Where,

(a) An involuntary patient or the nearest relative of an involuntary patient, as the case requires, refuses consent or an involuntary patient is not mentally competent and there is no relative of the patient from whom consent may be requested to the provision of a specific psychiatric treatment or a specific course of psychiatric treatment to the patient; and

(b) The attending physician, a psychiatrist who is a member and a psychiatrist who is not a member of the medical staff of the psychiatric facility in which the patient is detained each state in the prescribed form,

(i) that he has examined the patient,

(ii) that he is of the opinion that the mental condition of the patient will be or is likely to be substantially improved by the specific course of psychiatric treatment, and

(iii) that the mental condition of the patient will not or is not likely to improve without the specific treatment or course of treatment,

the attending physician on notice to the patient or the nearest relative, as the case requires, may apply to the regional review board for an order authorizing the providing of the treatment or course of treatment to the patient.

(5) Where the attending physician applies for a hearing under subsection (4), the regional review board shall appoint a time for and hold the hearing and shall issue its decision within seven days after the completion of the hearing and, where the board is satisfied,

- (a) that the mental condition of the patient will be or is likely to be substantially improved by the specific psychiatric treatment or course of treatment for the providing of which authority is sought; and
- (b) that the mental condition of the patient will not or is not likely to improve without the specific psychiatric treatment or course of treatment,

the board by order may authorize the providing of the psychiatric treatment or course of treatment specified in the application, but the board shall not authorize and no order of the board is or shall be deemed to be authority to perform psychosurgery.

(6) The attending physician and the patient or, where the patient is not mentally competent, the nearest relative or, if none, the Official Guardian and such other persons as the regional review board may specify are parties to the proceedings before the board. R.S.O. 1980, c.262, s.35.

36. (1) Forthwith upon the admission of a patient to a psychiatric facility, a physician shall examine the patient to determine whether or not he is competent to manage his estate.

(2) The attending physician may examine a patient and a physician may examine an out-patient at any time to determine whether or not the patient or out-patient is competent to manage his estate.

(3) After an examination under subsection (1) or (2), the physician or attending physician, as the case may be, shall enter his determination, together with written reasons therefor, in the clinical record prepared in respect of the patient.

(4) A physician or attending physician who performs an examination under subsection (1) or (2) and who is of the opinion that the patient or out-patient is not competent to manage his estate shall issue a certificate of incompetence in the prescribed form and the officer in charge shall transmit the certificate to the Public Trustee.

.....

(9) Subsections (1) to (8) do not apply to a patient or out-patient whose estate is under committeehip under the Mental Incompetency Act. R.S.O. 1980, c.262, s.36.

37. (1) Notwithstanding that under the Mental Incompetency Act a person other than the Public Trustee has been appointed as the committee of the estate of a patient or out-patient, the Supreme Court may at any time upon the application of the Public Trustee appoint him as committee in the stead of the person appointed under the Act, and on appointment the Public Trustee has and may exercise all the rights and powers conferred upon him by this Act with regard to the management of estates.

(2) If at any time a committee of the estate of a patient or out-patient is appointed under the Mental Incompetency Act, the Public Trustee thereupon ceases to be committee and shall account for and transfer to the committee so appointed the estate of the patient or out-patient that has come into his hands.

(3) An order shall not be made under the Mental Incompetency Act for the appointment of a committee of a patient or out-patient without the consent of the Public Trustee unless seven days notice of the application has been given to him.

(4) The acts of the Public Trustee while committee of a patient or out-patient are not rendered invalid by the making of an order appointing another committee. R.S.O 1980, c. 262, s.37.

.....

43. (1) Where a certificate of incompetence or a notice of continuance has been issued, the patient or out-patient may apply in the prescribed form to the chairman of the review board having jurisdiction to inquire into whether or not the patient or out-patient is competent to manage his estate.

(2) Except that applications may be made not more frequently than once in any six-month period, sections 31, 32 and 33 apply with necessary modifications to applications under subsection (1). R.S.O. 1980, c.262, s.43.

.....

65. (1) The Lieutenant Governor in Council may make regulations,

(a) designating and classifying psychiatric facilities, and exempting any psychiatric facility or class thereof from the application of any provision of the regulations made under clause (b);

(b) in respect of psychiatric facilities or any class thereof,

.....

(ii) prescribing the accommodation, facilities, equipment and services thereof,

(iii) providing for the government, management, conduct, operation, use and control thereof,

.....

(v) prescribing the forms, records, books, returns and reports to be made and kept in connection therewith and providing for returns, reports and information to be furnished to the Ministry;

.....

(g) respecting the examination and detention of persons and the admission, detention, leave of absence, absence without authorization, transfer, discharge and placement of patients;

- (h) prescribing the manner in which applications may be made to a review board;
- (i) governing and regulating hearings and other proceedings of review boards and advisory review boards;
- (j) prescribing the time in which decisions of review boards or recommendations of advisory review boards shall be transmitted;

.....

- (n) prescribing forms and providing for their use;
- (o) respecting any matter necessary or advisable to carry out effectively the intent and purpose of this Act.... R.S.O. 1980, c.262, s.65.

PROPOSED AMENDMENTS TO THE MENTAL HEALTH ACT

BILL 7

An Act to amend certain Ontario Statutes to conform to section 15 of the Canadian Charter of Rights and Freedoms. (1st Reading June 11th, 1985; 2nd Reading October 22nd, 1985.)

31. (1) Clause 1(j) of the Mental Health Act, being chapter 262 of the Revised Statutes of Ontario, 1980, is repealed and the following substituted therefor:

- (j) "nearest relative" means,
 - (i) a person to whom the person is married, with whom the person is living and who has attained the age of sixteen years and is mentally competent, or
 - (ii) if none, a person of the opposite sex with whom the person is living outside of marriage in a conjugal relationship of at least one year's duration and who has attained the age of sixteen years and is mentally competent, or
 - (iii) if none, a person to whom the person is married while living separate and apart who has attained the age of sixteen and is mentally competent, or
 - (iv) if none or if none is available, any one of the children who has attained the age of sixteen years and is mentally competent, or
 - (v) if none or if none is available, either of the parents who is mentally competent or the guardian, or

- (vi) if none or if none is available, any one of the brothers or sisters who has attained the age of sixteen years and is mentally competent, or
- (vii) if none or if none is available, any other of the next of kin who has attained the age of sixteen years and is mentally competent.

.....

(4) Subsection 35 (2) of the said Act is amended by striking out "majority" in the third line and inserting in lieu thereof "sixteen years".

(5) Section 35 of the said Act is amended by adding thereto the following subsections:

(2a) An involuntary patient determined to be not mentally competent to consent to psychiatric treatment proposed to be given under subsection (2) may apply in the prescribed form to the chairman of the regional review board having jurisdiction to inquire into whether the patient is not mentally competent to consent to the psychiatric treatment.

(2b) If an application is made under subsection (2a), the psychiatric treatment proposed under subsection (2) shall not be given until the matter is finally determined.

(2c) Sections 31, 32, 33, 33a, 33b, 33c, 33d, 33e and 33f apply with necessary modifications to an application under subsection (2a).

.....

(7) Where a person who gives a consent under this section claims to be married to the patient or a person of the opposite sex with whom the patient is living outside marriage in a conjugal relationship of at least one year's duration, but is not so related, the consent is valid for the purposes of this Act if the person who acted upon it had no reason to believe that the person who gave it was not so related.

PUBLIC HOSPITALS ACT

R.S.O. 1980, c.410, as amended by 1981, c.25.

29. (1) Subject to the approval of the Lieutenant Governor in Council, the Minister may make such regulations with respect to hospitals as are considered necessary for,

(a) their creation, establishment, construction, alteration, equipment, safety, maintenance and repairs;

.....

(d) prescribing the matters upon which by-laws are to be passed by hospitals;

.....

- (j) the admission, treatment, care, conduct, control and discharge of patients or any class of patients;

.....

- (o) the records, books, accounting systems, audits, reports and returns to be made and kept by hospitals;

.....

- (q) prescribing the requirements to be satisfied for obtaining a valid consent for any surgical operation, diagnostic procedure or medical treatment, the method of obtaining such consent, the conditions under which such consent may be dispensed with and specifying the age or ages at which and under what conditions a patient may give a valid consent for a surgical operation, diagnostic procedure or medical treatment to be performed on himself.... R.S.O. 1980, c.410, s.29.

.....

As of June 1985, there was an amendment to the Mental Hospitals Act which provided that section 21(1)(q) under the Public Hospitals Act, R.S.O. 1980, c.410, and section 51 of Regulation 865 made under that Act (cited in the preceding section of this Report which deals with the Public Hospitals Act) are now also applicable to the provincial psychiatric hospitals.

Regulation 865 under the Public Hospitals Act

51. Where the attending physician or the administrator is of the opinion that a consent in writing should be obtained before a diagnostic test or a medical treatment procedure is performed on a patient or an out-patient, such consent shall be signed by,

- (a) the patient or out-patient, as the case may be, where the patient or out-patient is,
 - (i) sixteen years of age or over, or
 - (ii) married;
- (b) a parent, guardian or next-of-kin of the patient or out-patient, as the case may be, where the patient or out-patient is unmarried and under sixteen years of age; or
- (c) the spouse or a parent, guardian or next-of-kin of the patient or out-patient, as the case may be, where the patient or out-patient is unable to consent in writing by reason of mental or physical disability. O. Reg. 100/74, s.11, part.

MENTAL HOSPITALS ACT

R.S.O. 1980, c.263.

4. The Lieutenant Governor in Council may designate any provision of the Public Hospitals Act or of the regulations thereunder as being applicable to any institution under this Act. R.S.O. 1970, c. 270, s. 4.
5. (1) The Lieutenant Governor in Council may make such regulations as are necessary for carrying out this Act and for the efficient administration thereof. R.S.O. 1970, c. 270, s. 5(1).

.....

- (e) regulating the inspection, superintendence, government, management, conduct, operation, maintenance, care and use of institutions and equipment;
- (f) regulating the care, treatment and maintenance of patients;

.....

- (h) prescribing the forms relating to patients and all other forms required for the carrying out of this Act and the regulations;
- (i) prescribing the records, books, accounting systems, audits, reports and returns to be made and kept respecting institutions;

.....

As of June 1985, there was an amendment to the Mental Hospitals Act which provided that section 21(1)(q) under the Public Hospitals Act, R.S.O. 1980, c.410 and section 51 of Regulation 865 made under that Act (cited in this Schedule among the excerpts from the Public Hospitals Act) are now also applicable to the provincial psychiatric hospitals.

HEALTH DISCIPLINES ACT

R.S.O. 1980, c.196, as amended, 1983, c.59.

PART I

GENERAL

1. (2) In this Part,

- (a) "College" means the corporate body of a health discipline or group of health disciplines as established for that discipline or group in a Part of this Act;

- (b) "complaints committee" means the complaints committee of a health discipline or group of health disciplines as established for that discipline or group in a Part of this Act;
- (c) "Council" means the governing body of a health discipline or group of health disciplines as established for that discipline or group in a Part of this Act;
- (d) "discipline committee" means the discipline committee of a health discipline or group of health disciplines as established for that discipline or group in a Part of this Act.... R.S.O. 1980, c.196, s.1.

.....

- 3. (1) It is the duty of the Minister to ensure that the activities of health disciplines are effectively regulated and co-ordinated in the public interest, to have appropriate standards of practice developed and ensure that these are maintained and to ensure that the rights of individuals to the services provided by health disciplines of their choice are maintained and to these ends to,
 - (a) inquire into or direct the appropriate Council or Councils to inquire into the state of the practice of one or more health disciplines in any locality or institution;
 - (b) require Councils to provide such reports and information as the Minister requires for his purposes including information from the registers of the Colleges;
 - (c) review proposals by a Council for changes in legislation or regulations of concern to that Council;
 - (d) consider the by-laws of Councils and provide advice and guidance to Councils with respect to the proposed implementation or revision of such by-laws;
 - (e) request a Council to make, amend or revoke regulations respecting any of the matters specified in its applicable Part; and
 - (f) review legislation respecting the provision of health services by health disciplines. R.S.O. 1980, c.196, s.3.

.....

PART III

MEDICINE

- 46. (2) The objects of the (College of Physicians and Surgeons of Ontario) are,
 - (a) to regulate the practice of medicine and to govern its members in accordance with this Act, the regulations and the by-laws;

- (b) to establish, maintain and develop standards of knowledge and skill among its members;
- (c) to establish, maintain and develop standards of qualification and practice for the practice of medicine;
- (d) to establish, maintain and develop standards of professional ethics among its members;
- (e) to administer this Part and perform such other duties and exercise such other powers as are imposed or conferred on the College by or under any Act;
- (f) such other objects relating to human health care as the Council considers desirable,

in order that the public interest may be served and protected. R.S.O. 1980, c.196, s.46.

.....

49. In addition to his powers and duties under Part I, the Minister may,

.....

- (b) request the Council to undertake activities that, in the opinion of the Minister, are necessary and advisable to carry out the intent of this Act.... R.S.O. 1980, c.196, s.49.

.....

50. Subject to the approval of the Lieutenant Governor in Council and with prior review by the Minister, the Council may make regulations,

.....

- (g) governing standards of practice for the profession;

.....

- (m) defining professional misconduct for the purposes of this Part;
- (n) providing for a program of continuing education of members to maintain their standard of competence and requiring members to participate in such continuing education;

.....

- (r) requiring and providing for the inspection and examination of books, accounts, reports and medical records of members in connection with their practice;
- (s) providing for the compilation of statistical information on the supply, distribution and professional activities of members and requiring members to provide the information necessary to compile such statistics.... R.S.O. 1980, c.196, s.50.

.....

53. (1) The Council shall establish and appoint as hereinafter provided the following committees,

.....

- (c) Complaints Committee;
- (d) Discipline Committee;

.....

and may establish such other committees as the Council from time to time considers necessary.... R.S.O. 1980, c.196, s.53.

.....

- 64a. (1) The Council may establish a Committee on Peer Assessment.

(2) Subject to the approval of the Council, the Committee on Peer Assessment shall establish, administer and develop a peer assessment program for the assessment of the standards of practice of members in the care of patients and in the maintenance of records of the care of patients.... R.S.O. 1983, c.59, s.2.

.....

PART IV

NURSING

.....

69. (2) The objects of the (College of Nurses of Ontario) are,

- (a) to regulate the practice of medicine and to govern its members in accordance with this Act, the regulations and the by-laws;
- (b) to establish, maintain and develop standards of knowledge and skill among its members;
- (c) to establish, maintain and develop standards of qualification and practice for the practice of medicine;
- (d) to establish, maintain and develop standards of professional ethics among its members;
- (e) to administer this Part and perform such other duties and exercise such other powers as are imposed or conferred on the College by or under any Act;
- (f) such other objects relating to human health care as the Council considers desirable,

in order that the public interest may be served and protected. R.S.O. 1980, c.196, s.46.

Regulation 448 under the Health Disciplines Act

27. For the purpose of Part III of the Act, "professional misconduct" means,

.....

21. failure to maintain the standard of practice of the profession;

.....

23. failing to continue to provide professional services to a patient until the services are no longer required or until the patient has had a reasonable opportunity to arrange for the services of another member.... R.R.O. 1980, Reg. 448, s.27; O. Reg. 112/83, s.1; O. Reg. 344/85, s.4.

.....

SCHEDULE "J"

ONTARIO LEGISLATION ADMINISTERED BY MINISTRIES OTHER THAN THE MINISTRY OF HEALTH

The following are excerpts from the Mental Incompetency Act, the Statutory Powers Procedure Act and the Child and Family Services Act, 1984.

MENTAL INCOMPETENCY ACT **R.S.O. 1980, c.264.**

1. (e) "mentally incompetent person" means a person,
- (i) in whom there is such a condition of arrested or incomplete development of mind, whether arising from inherent causes or induced by disease or injury, or
 - (ii) who is suffering from such a disorder of the mind,
- that he requires care, supervision and control for his protection and the protection of his property.... R.S.O. 1980, c.264, s.1.

.....

4. (1) Subject to the Mental Health Act, the court has all the powers, jurisdiction and authority of Her Majesty over and in relation to the persons and estates of mentally incompetent persons, including the care and the commitment of the custody of mentally incompetent persons and of their persons and estates.

(2) The court may make orders for the custody of mentally incompetent persons and the management of their estates, and every such order takes effect, as to the custody of the person, immediately and, as to the custody of the estate, upon the completion of the committee's security. R.S.O. 1980, c.264, s.4.

.....

7. (1) The court upon application supported by evidence may by order declare a person a mentally incompetent person if the court is satisfied that the evidence establishes beyond reasonable doubt that he is a mentally incompetent person.

(2) The application may be made by the Attorney General, by any one or more of the next of kin of the alleged mentally incompetent person, by his or her wife or husband, by a creditor, or by any other person.

(3) The alleged mentally incompetent person and any person aggrieved or affected by the order has the right to appeal therefrom.

(4) The practice and procedure on the appeal shall be the same as on an appeal from an order made by a judge of the court. R.S.O. 1980, c.264, s.7.

8. (1) Where in the opinion of the court the evidence does not establish beyond reasonable doubt the alleged mental incompetency, or where for any other reason the court considers it expedient so to do, instead of making an order under subsection 7(1), the court may direct an issue to try the alleged mental incompetency.

.....

(5) On the trial of the issue the inquiry shall be confined to the question whether or not the person who is the subject of the inquiry is at the time of the inquiry a mentally incompetent person and incapable of managing himself or his affairs, and the presiding judge shall make an order in accordance with the result of the inquiry.... R.S.O. 1980, c.264, s.8.

.....

11. (1) Upon application at any time after the expiration of one year from the date of the order by which a person has been declared a mentally incompetent person, or sooner by leave of the court, the court, if satisfied that the person has become mentally competent and capable of managing his own affairs, may make an order so declaring.

(2) Any such order is subject to appeal as provided by subsections 7(3) and (4).... R.S.O. 1980, c.264, s.11.

12. (1) Where an order has been made declaring a person a mentally incompetent person under section 7 or incapable of managing his affairs under section 39, the court, in the same or a subsequent order, shall,

- (a) appoint a committee of the person or of the estate of the person, or both;
- (b) propound a scheme for the management of the estate of the person; and
- (c) fix a time for the passing of the accounts of the committee. R.S.O. 1980, c.264, s.12(1); 1984, c.11, s.195(2).

.....

18. The court may by order authorize and direct the committee of the estate of a mentally incompetent person to do all or any of the following things.... R.S.O. 1980, c.264, s.18.

(Note: Subsections 18(a) to (m) specify estate-related transactions.)

.....

**APPLICATION OF ACT TO PERSONS NOT MENTALLY
INCOMPETENT, BUT INCAPACITATED BY
MENTAL INFIRMITY**

39. (1) The provisions of this Act relating to management and administration apply to every person not declared to be mentally incompetent with regard to whom it is proved, to the satisfaction of the court, that he is, through mental infirmity, arising from disease, age or other cause, or by reason of habitual drunkenness or the use of drugs, incapable of managing his affairs.... R.S.O. 1980, c.264, s.39.

STATUTORY POWERS PROCEDURE ACT
R.S.O. 1980, Chapter 484.

PART I

MINIMUM RULES FOR PROCEEDINGS OF CERTAIN TRIBUNALS

1. (1) In this Act,
 - (a) "Committee" means the Statutory Powers Procedure Rules Committee;
 - (b) "licence" includes any permit, certificate, approval, registration or similar form of permission required by law;
 - (c) "municipality" has the same meaning as in the Municipal Affairs Act, and includes a district, metropolitan and regional municipality and their local boards;
 - (d) "statutory power of decision" means a power or right, conferred by or under a statute, to make a decision deciding or prescribing,
 - (i) the legal rights, powers, privileges, immunities, duties or liabilities of any person or party, or
 - (ii) the eligibility of any person or party to receive, or to the continuation of, a benefit or licence, whether he is legally entitled thereto or not;
 - (e) "tribunal" means one or more persons, whether or not incorporated and however described, upon which a statutory power of decision is conferred by or under a statute.... R.S.O. 1980, c.484, s.1.

2. In this Part,
 - (a) "hearing" means a hearing in any proceedings;
 - (b) "proceedings" means proceedings to which this Part applies. R.S.O. 1980, c.484, s.2.

3. (1) Subject to subsection (2), this Part applies to proceedings by a tribunal in the exercise of a statutory power of decision conferred by or

under an Act of the Legislature, where the tribunal is required by or under such Act or otherwise by law to hold or to afford to the parties to the proceedings an opportunity for a hearing before making a decision.

- (2) This Part does not apply to proceedings,
 - (a) before the Assembly or any committee of the Assembly;
 - (b) in or before,
 - (i) the Supreme Court,
 - (ii) a county or district court,
 - (iii) a surrogate court,
 - (iv) a provincial court or a provincial offences court established under the Provincial Courts Act,
 - (v) the Unified Family Court,
 - (vi) a small claims court, or
 - (vii) a justice of the peace;
 - (c) to which the Rules of Practice and Procedure of the Supreme Court apply;
 - (d) before an arbitrator to which the Arbitrations Act or the Labour Relations Act applies;
 - (e) at a coroner's inquest;
 - (f) of a commission appointed under the Public Inquiries Act;
 - (g) of one or more persons required to make an investigation and to make a report, with or without recommendations, where the report is for the information or advice of the person to whom it is made and does not in any way legally bind or limit that person in any decision he may have power to make; or
 - (h) of a tribunal empowered to make regulations, rules or by-laws in so far as its power to make regulations, rules or by-laws is concerned. R.S.O. 1980, c.484, s.3.

4. Notwithstanding anything in this Act and unless otherwise provided in the Act under which the proceedings arise, or the tribunal otherwise directs, any proceedings may be disposed of by,

- (a) agreement;
- (b) consent order; or
- (c) a decision of the tribunal given,
 - (i) without a hearing, or

- (ii) without compliance with any other requirement of this Act,

where the parties have waived such hearing or compliance.
R.S.O. 1980, c.484, s.4.

5. The parties to any proceedings shall be the persons specified as parties by or under the statute under which the proceedings arise or, if not so specified, persons entitled by law to be parties to the proceedings. R.S.O. 1980, c.484, s.5.
6. (1) The parties to any proceedings shall be given reasonable notice of the hearing by the tribunal.
(2) A notice of a hearing shall include,
 - (a) a statement of the time, place and purpose of the hearing;
 - (b) a reference to the statutory authority under which the hearing will be held; and
 - (c) a statement that if the party notified does not attend at the hearing, the tribunal may proceed in his absence and he will not be entitled to any further notice in the proceedings. R.S.O. 1980, c.484, s.6.
7. Where notice of a hearing has been given to a party to any proceedings in accordance with this Act and the party does not attend at the hearing, the tribunal may proceed in his absence and he is not entitled to any further notice in the proceedings. R.S.O. 1980, c.484, s.7.
8. Where the good character, propriety of conduct or competence of a party is an issue in any proceedings, the party is entitled to be furnished prior to the hearing with reasonable information of any allegations with respect thereto. R.S.O. 1980, c.484, s.8.
9. (1) A hearing shall be open to the public except where the tribunal is of the opinion that,
 - (a) matters involving public security may be disclosed; or
 - (b) intimate financial or personal matters or other matters may be disclosed at the hearing of such a nature, having regard to the circumstances, that the desirability of avoiding disclosure thereof in the interests of any person affected or in the public interest outweighs the desirability of adhering to the principle that hearings be open to the public,

in which case the tribunal may hold the hearing concerning any such matters in camera.

- (2) A tribunal may make such orders or give such directions at a hearing as it considers necessary for the maintenance of order at the hearing, and, if any person disobeys or fails to comply with any such order or direction, the tribunal or a member thereof may call for the assistance of any peace officer to enforce the order or direction, and every peace officer so called upon shall take such action as is necessary to enforce the order or direction

and may use such force as is reasonably required for that purpose. R.S.O. 1980, c.484, s.9.

10. A party to proceedings may at a hearing,
 - (a) be represented by counsel or an agent;
 - (b) call and examine witnesses and present his arguments and submissions;
 - (c) conduct cross-examinations of witnesses at a hearing reasonably required for a full and fair disclosure of the facts in relation to which they have given evidence. R.S.O. 1980, c.484, s.10.
11. (1) A witness at a hearing is entitled to be advised by his counsel or agent as to his rights but such counsel or agent may take no other part in the hearing without leave of the tribunal.

(2) Where a hearing is in camera, a counsel or agent for a witness is not entitled to be present except when that witness is giving evidence. R.S.O. 1980, c.484, s.11.
12. (1) A tribunal may require any person, including a party, by summons,
 - (a) to give evidence on oath or affirmation at a hearing; and
 - (b) to produce in evidence at a hearing documents and things specified by the tribunal,relevant to the subject-matter of the proceedings and admissible at a hearing.

(2) A summons issued under subsection (1) shall be in (Form 1 under this Act) and,
 - (a) where the tribunal consists of one person, shall be signed by him; or
 - (b) where the tribunal consists of more than one person, shall be signed by the chairman of the tribunal or in such other manner as documents on behalf of the tribunal may be signed under the statute constituting the tribunal; and
 - (c) shall be served personally on the person summoned who shall be paid the like fees and allowances for his attendance as a witness before the tribunal as are paid for the attendance of a witness summoned to attend before the Supreme Court.
(3) Upon proof to the satisfaction of a judge of the Supreme Court of the service of a summons under this section upon a person and that,
 - (a) such person has failed to attend or to remain in attendance at a hearing in accordance with the requirements of the summons;

- (b) a sufficient sum for his fees and allowances has been duly paid or tendered to him; and
- (c) his presence is material to the ends of justice,

the judge may, by his warrant in (Form 2, under this Act) directed to any sheriff, police officer or constable, cause such witness to be apprehended anywhere within Ontario and forthwith to be brought before the tribunal and to be detained in custody as the judge may order until his presence as a witness before the tribunal is no longer required, or, in the discretion of the judge, to be released on a recognizance (with or without sureties) conditioned for appearance to give evidence.

(4) Service of a summons and payment of tender of fees or allowance may be proved by affidavit in an application under subsection (3).

(5) Where an application under subsection (3) is made on behalf of a tribunal, the person constituting the tribunal, or where the tribunal consists of two or more persons, the chairman thereof may certify to the judge the facts relied on to establish that the presence of the persons summoned is material to the ends of justice and such certificate may be accepted by the judge as proof of such facts.

(6) Where an application under subsection (3) is made by a party to the proceedings, proof of the facts relied on to establish that the presence of the person summoned is material to the ends of justice may be by affidavit of such party. R.S.O. 1980, c.484, s.12.

13. Where any person without lawful excuse,

- (a) on being duly summoned under section 12 as a witness at a hearing makes default in attending at the hearing; or
- (b) being in attendance as a witness at a hearing, refuses to take an oath or to make an affirmation legally required by the tribunal to be taken or made, or to produce any document or thing in his power or control legally required by the tribunal to be produced by him or to answer any question to which the tribunal may legally require an answer; or
- (c) does any other thing that would, if the tribunal had been a court of law having power to commit for contempt, have been contempt of that court,

the tribunal may, of its own motion or on application of a party to the proceedings, state a case to the Divisional Court setting out the facts and that court may, on application on behalf of and in the name of the tribunal or by such party, inquire into the matter and, after hearing any witness who may be produced against or on behalf of that person and after hearing any statement that may be offered in defence, punish or take steps for the punishment of that person in like manner as if he had been guilty of contempt of the court. R.S.O. 1980, c.484, s.13.

14. (1) A witness at a hearing shall be deemed to have objected to answer any question asked him upon the ground that his answer may tend to criminate him or may tend to establish his liability to civil proceedings at the instance of the Crown, or of any person, and no answer given by a

witness at a hearing shall be used or be receivable in evidence against him in any trial or other proceedings against him thereafter taking place, other than a prosecution for perjury in giving such evidence.

(2) A witness shall be informed by the tribunal of his right to object to answer any question under section 5 of the Canada Evidence Act. R.S.O. 1980, c.484, s.14.

15. (1) Subject to subsections (2) and (3), a tribunal may admit as evidence at a hearing, whether or not given or proven under oath or affirmation or admissible as evidence in a court,

(a) any oral testimony; and

(b) any document or other thing,

relevant to the subject matter of the proceedings and may act on such evidence, but the tribunal may exclude anything unduly repetitious.

(2) Nothing is admissible in evidence at a hearing,

(a) that would be inadmissible in a court by reason of any privilege under the law of evidence; or

(b) that is inadmissible by the statute under which the proceedings arise or any other statute.

(3) Nothing in subsection (1) overrides the provisions of any Act expressly limiting the extent to or purposes for which any oral testimony, documents or things may be admitted or used in evidence in any proceedings.

(4) Where a tribunal is satisfied as to their authenticity, a copy of a document or other thing may be admitted as evidence at a hearing.

(5) Where a document has been filed in evidence at a hearing, the tribunal may, or the person producing it or entitled to it may with the leave of the tribunal, cause the document to be photocopied and the tribunal may authorize the photocopy to be filed in evidence in the place of the document filed and release the document filed, or may furnish to the person producing it or the person entitled to it a photocopy of the document filed certified by a member of the tribunal.

(6) A document purporting to be a copy of a document filed in evidence at a hearing, certified to be a true copy thereof by a member of the tribunal, is admissible in evidence in proceedings in which the document is admissible as evidence of the document. R.S.O. 1980, c.484, s.15.

16. A tribunal may, in making its decision in any proceedings,

(a) take notice of facts that may be judicially noticed; and

(b) take notice of any generally recognized scientific or technical facts, information, or opinions within its scientific or specialized knowledge. R.S.O. 1980, c.484, s.16.

17. A tribunal shall give its final decision and order, if any, in any proceedings in writing and shall give reasons in writing therefor if requested by a party. R.S.O. 1980, c.484, s.17.

18. A tribunal shall send by first class mail addressed to the parties to any proceedings who took part in the hearing, at their addresses last known to the tribunal, a copy of its final decision and order, if any, in the proceedings, together with the reasons therefor, where reasons have been given, and each party shall be deemed to have received a copy of the decision or order on the fifth day after the day of mailing unless the party did not, acting in good faith, through absence, accident, illness or other cause beyond his control receive the copy of the decision or order until a later date. R.S.O. 1980, c.484, s.18.
19. (1) A certified copy of a final decision and order, if any, of a tribunal in any proceedings may be filed in the office of the Registrar of the Supreme Court by the tribunal or by a party and if it is for the payment of money, it may be enforced at the instance of the tribunal or of such party in the name of the tribunal in the same manner as a judgment of that court, and in all other cases by an application by the tribunal or by such party to the court for such order as the court may consider just.

(2) Where a tribunal having power to do so makes an order or decision rescinding or varying an order or decision previously made by it that has been filed under subsection (1), upon filing in accordance with subsection (1) the order or decision rescinding or varying the order or decision previously made,
 - (a) if the order rescinds the order or decision previously made, the order or decision previously made ceases to have effect for the purposes of subsection (1); or
 - (b) if the order or decision varies the order or decision previously made, the order or decision previously made as so varied may be enforced in a like manner as an order or decision filed under subsection (1). R.S.O. 1980, c.484, s.19.
20. A tribunal shall compile a record of any proceedings in which a hearing has been held which shall include,
 - (a) any application, complaint, reference or other document, if any, by which the proceedings were commenced;
 - (b) the notice of any hearing;
 - (c) any intermediate orders made by the tribunal;
 - (d) all documentary evidence filed with the tribunal, subject to any limitation expressly imposed by any other Act on the extent to or the purposes for which any such documents may be used in evidence in any proceedings;
 - (e) the transcript, if any, of the oral evidence given at the hearing; and
 - (f) the decision of the tribunal and the reasons therefor, where reasons have been given. R.S.O. 1980, c.484, s.20.
21. A hearing may be adjourned from time to time by a tribunal of its own motion or where it is shown to the satisfaction of the tribunal that the adjournment is required to permit an adequate hearing to be held. R.S.O. 1980, c.484, s.21.

22. A member of a tribunal has power to administer oaths and affirmations for the purpose of any of its proceedings and the tribunal may require evidence before it to be given under oath or affirmation. R.S.O. 1980, c.484, s.22.
23. (1) A tribunal may make such orders or give such directions in proceedings before it as it considers proper to prevent abuse of its processes.
- (2) A tribunal may reasonably limit further cross-examination of a witness where it is satisfied that the cross-examination of the witness has been sufficient to disclose fully and fairly the facts in relation to which he has given evidence.
- (3) A tribunal may exclude from a hearing anyone, other than a barrister and solicitor qualified to practise in Ontario, appearing as an agent on behalf of a party or as an adviser to a witness if it finds that such person is not competent properly to represent or to advise the party or witness or does not understand and comply at the hearing with the duties and responsibilities of an advocate or adviser. R.S.O. 1980, c.484, s.23.
24. (1) Where a tribunal is of opinion that because the parties to any proceedings before it are so numerous or for any other reason, it is impracticable,
- (a) to give notice of the hearing; or
- (b) to send its decision and the material mentioned in section 18,
- to all or any of the parties individually, the tribunal may, instead of doing so, cause reasonable notice of the hearing or of its decision to be given to such parties by public advertisement or otherwise as the tribunal may direct.
- (2) A notice of a decision given by a tribunal under clause (1)(b) shall inform the parties of the place where copies of the decision and the reasons therefor, if reasons were given, may be obtained. R.S.O. 1980, c.484, s.24.
25. (1) Unless it is expressly provided to the contrary in the court under which the proceedings arise, an appeal from a decision of a tribunal to a court or other appellate tribunal operates as a stay in the matter except where the tribunal or the court or other body to which the appeal is taken otherwise orders.
- (2) An application for judicial review under the Judicial Review Procedure Act, or the bringing of proceedings specified in subsection 2 (1) of that Act is not an appeal within the meaning of subsection (1). R.S.O. 1980, c.484, s.25.

CHILD AND FAMILY SERVICES ACT, 1984

(Note that sections 124 and 125 hereunder have not been proclaimed and therefore are not in force.)

3. (1) In this Act,

.....

2. "approved agency" means an agency that is approved under subsection 8(1) of Part I (Flexible Services);

3. "approved service" means a service provided,

i. under subsection 7(1) of Part I or with the support of a grant or contribution made under subsection 7(2) of that Part,

ii. by an approved agency, or

iii. under the authority of a licence;

.....

6. "child" means a person under the age of eighteen years;

.....

7. (1) The Minister may,

(a) provide services and establish, operate and maintain facilities for the provision of services; and

(b) make agreements with persons, municipalities and agencies for the provision of services,

and may make payments for those services and facilities out of legislative appropriations.

(2) The Minister may make grants and contributions, out of legislative appropriations, to any person, organization or municipality for consultation, research and evaluation with respect to services and for the provision of services.

8. (1) Where the Minister is satisfied that an agency is, with financial assistance under this Part and the regulations, financially capable of establishing, maintaining and operating a service and that its affairs are carried on under competent management in good faith, the Minister may approve the agency to provide that service.

.....

PART VI
EXTRAORDINARY MEASURES

108. In this Part,

.....

- (b) "intrusive procedure" means,
- (i) a mechanical means of controlling behaviour,
 - (ii) an aversive stimulation technique, or
 - (iii) any other procedure,
- that is prescribed as an intrusive procedure;
- (c) "mental disorder" means a substantial disorder of emotional processes, thought or cognition which grossly impairs a person's capacity to make reasoned judgements;

.....

- (d) "review team" means an interdisciplinary review team established under subsection 123(1).

.....

123. (1) A service provider who is approved under subsection 124(1) shall establish an interdisciplinary review team with the duty of reviewing and approving or refusing the proposed use of intrusive procedures.

(2) A review team shall consist of,

- (a) persons employed by the service provider; and
- (b) one person who is not employed by the service provider and is approved by the Minister,

and may also include a legally qualified medical practitioner.

(3) Any three members of a review team may review and approve or refuse the proposed use of an intrusive procedure.

(4) A review team shall make a report to the service provider concerning every review conducted under subsection (3) and subsection 127(1) (review of certain recommended procedures).

(5) A review team shall make reports of its activities to the Minister at the prescribed intervals.

124. (1) The Minister may approve a service provider for the use of the intrusive procedures specified in the approval and may set out in the approval any conditions and limitations to which it is subject.

(2) The Minister may at any time revoke, suspend or amend an approval given under subsection (1) and shall give the affected service provider notice, with reasons, of the Minister's decision.

125. (1) No service provider shall use or permit the use of an intrusive procedure in respect of a child in the service provider's care, except in accordance with this section.

(2) Subsection (1) does not prohibit the use of restraints that are reasonably necessary for the secure transportation or transfer of a child who is detained or has been committed to custody under the Young Offenders Act (Canada) or to whom section 91 of Part IV (Young Offenders) (open custody) applies.

(3) A service provider who is approved under subsection 124(1) may use or permit the use of an intrusive procedure in respect of a child in the service provider's care only,

- (a) if the intrusive procedure is specified in the approval;
- (b) in accordance with the conditions and limitations set out in the Minister's approval; and
- (c) with the approval, obtained in advance and not more than thirty days before the intrusive procedure is used, of the service provider's review team.

(4) A review team shall not approve the use of an intrusive procedure in respect of a child unless,

- (a) if the child is sixteen years of age or more, the child consents to its use;
- (b) if the child is less than sixteen years of age, the child's parent or, where the child is in a society's lawful custody, the society consents to its use;
- (c) the child's behaviour warrants its use;
- (d) at least one less intrusive alternative has been attempted without success in improving the child's behaviour;
- (e) no other less intrusive alternative is practicable; and
- (f) there are reasonable grounds to believe that the procedure would improve the child's behaviour.

(5) A review team shall not approve the use of an intrusive procedure in respect of a child who is less than sixteen years of age or lacks capacity within the meaning of section 4 without first considering the child's views and preferences, where they can be reasonably ascertained.

(6) Where,

- (a) a service provider who is approved under subsection 124(1) believes on reasonable grounds that delay in the use of an intrusive procedure in respect of a child in the service

provider's care would cause the child or another person serious mental or physical harm;

- (b) the intrusive procedure is specified in the Minister's approval;
- (c) if the child is sixteen years of age or more, the child consents to the use of the intrusive procedure or apparently does not have capacity; and
- (d) if the child is less than sixteen years of age, the child's parent or, where the child is in a society's lawful custody, the society,
 - (i) consents to the use of the intrusive procedure, or
 - (ii) is not immediately available,

the service provider may use or permit the use of the intrusive procedure in respect of the child, in accordance with the conditions and limitations set out in the Minister's approval, during a period not exceeding seventy-two hours, without the approval of the review team, despite clause (3)(c).

(7) Where a service provider uses or permits the use of an intrusive procedure under subsection (6), the service provider shall seek the review team's approval as soon as possible, and in any event within seventy-two hours of the first use of the intrusive procedure, and shall not continue its use or permit its continued use in respect of the child unless the review team approves it.

.....

127. (1) Where it is recommended that a child in the care of or regularly receiving services from a service provider who has established a review team undergo,

- (a) non-therapeutic medical or chemical experimentation;
- (b) psychosurgery;
- (c) non-therapeutic sterilization; or
- (d) electro-convulsive therapy,

three members of the review team shall review the matter and advise the child's parent or, where the child is in a society's lawful custody, the society, and the service provider of the review team's opinion as to the appropriateness of the recommendation.

(2) One of the members of the review team acting under subsection (1) shall be a legally qualified medical practitioner.

(3) No procedure referred to in subsection (1) shall be carried out in premises where an approved service or a service purchased by an approved agency is provided.

.....

SCHEDULE "K"

CONSTITUTION ACT, 1982, PART I: CANADIAN CHARTER OF RIGHTS AND FREEDOMS

The following are excerpts from Charter of Rights and Freedoms.

1. The Canadian Charter of Rights and Freedoms guarantees the rights and freedoms set out in it subject only to such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society.

2. Everyone has the following fundamental freedoms:
 - (a) freedom of conscience and religion;
 - (b) freedom of thought, belief, opinion and expression, including freedom of the press and other media of communication;
 - (c) freedom of peaceful assembly; and
 - (d) freedom of association.

.....

7. Everyone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice.

.....

9. Everyone has the right not to be arbitrarily detained or imprisoned.

.....

10. Everyone has the right on arrest or detention
 - (a) to be informed promptly of the reasons therefor;
 - (b) to retain and instruct counsel without delay and to be informed of that right; and
 - (c) to have the validity of the detention determined by way of habeas corpus and to be released if the detention is not lawful.

.....

12. Everyone has the right not to be subjected to any cruel and unusual treatment or punishment.

.....

15. (1) Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.

(2) Subsection (1) does not preclude any law, program or activity that has as its object the amelioration of conditions of disadvantaged individuals or groups including those that are disadvantaged because of race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.

.....

28. Notwithstanding anything in this Charter, the rights and freedoms referred to in it are guaranteed equally to male and female persons.

.....

32. (i) This Charter applies

- (a) to the Parliament and government of Canada in respect of all matters within the authority of Parliament including all matters relating to the Yukon Territory and Northwest Territories; and
- (b) to the legislature and government of each province in respect of all matters within the authority of the legislature of each province.

SCHEDULE "L"

REPORT OF THE TASK FORCE ON ELECTROCONVULSIVE THERAPY OF THE AMERICAN PSYCHIATRIC ASSOCIATION

This excerpt from the 1978 Task Force Report of the American Psychiatric Association comprises Chapter IX on Future Research.

IX. FUTURE RESEARCH

This chapter will briefly review which of the several unexplained aspects of ECT should be investigated to provide the data that are urgently needed. Before proceeding to an outline of the topics to be studied, we will refer briefly to funding and outline the criteria essential for systematic research and the observance of ethical requirements.

The Research Task Force of the National Institute of Mental Health reported in 1974¹ that less than one percent of its total somatic therapy research grants from 1968 to 1973 were devoted to convulsive therapy. Of 9.9 million dollars granted for somatic therapy research in 1972 and 1973, less than five thousand dollars was provided for the study of ECT. Considerably greater sums of money will have to be spent before we resolve the challenging questions referred to in this report.

Many of the earlier publications referred to in these pages lack the rigorous scientific methods of modern clinical research; the data in those instances are unsatisfactory. The very nature of the ECT procedure renders blind clinical studies difficult to achieve. Nevertheless, attention should still be paid to the methodological principles of homogeneous diagnostic groups (when feasible), random samples, prospective methods, appropriate and simultaneous controls, significant sample numbers, and blind outside raters where possible. The study should attempt to specify the treatment task; the nature of the intervention; details of the procedure; the action mechanisms; and the nature, degree, and durability of the effected change.

It is important not only to consider the diagnosis and personality differences in categorizing patients but also to consider the cultural or class differences that might affect response. Standardized report forms should be utilized, permitting increased comparability of data. These measures should distinguish between "change" and "outcome," i.e. what criteria of change were used in arriving at a judgement regarding degree of improvement. Computer analysis of derived data, dissection of confounding variables, and multiple hospital involvement should be considered. Methods should be well-designed to include number and frequency of ECT, parameters of electrical stimulation, electrode placement, type of equipment, and evidence of a cerebral seizure as well as adequate drug levels (serum measurements), quantitative neurophysiologic measures, and detailed behavioral assessments.

Clinical research involving ECT should be conducted in a research setting that meets community standards and the requirements of patients' rights. Prior approval should be obtained from the human rights and research committees or their equivalent. Special attention should be paid to adequate record-keeping

including: details of previous history, rationale for treatment, careful observations of the patient, documentation of all deliberations relating to the use of ECT, the number of treatments, complications, etc. It is essential that informed consent be given by the patient and/or the court or the relatives. (See Chapter VII)

The areas reviewed below have been abstracted from the preceding chapters and represent the more important questions that require attention.

(a) Clinical Efficacy in Depression

- (i) How does ECT compare with high-dose tricyclics, and tricyclics plus antipsychotic drugs, in the treatment of delusionally depressed patients?
- (ii) Is there a pure ECT-response, non-drug-responsive group of patients and what are their clinical characteristics?
- (iii) When in the course of antidepressant and antipsychotic treatment should ECT be employed, and when should ECT be the preferred treatment? Does the simultaneous use of drugs and ECT enhance outcome? What are the risks?
- (iv) Can a dose-response curve be determined for ECT for various clinical entities?
- (v) What is the long term follow-up of matched groups of patients treated with ECT and long-acting antipsychotic medication respectively?
- (vi) What is the long term effect of ECT on the natural history of the illness?
- (vii) How do the results of maintenance ECT compare with antidepressant drug maintenance and lithium?
- (viii) What is the comparative efficacy of unilateral and bilateral electrode placement in severe depressive illness?

(b) Clinical Efficacy in Schizophrenia

- (i) What is the efficacy of ECT in schizophrenia?
- (ii) What specific diagnostic categories are most responsive?
- (iii) Does the presence of a marked affective component improve the response to ECT?
- (iv) What is the value of unilateral electrode placement in schizophrenia?
- (v) How effective is ECT in the treatment of chronic schizophrenia?
- (vi) Do schizophrenic patients require larger numbers of treatments for a response to occur?

- (vii) What is usually the minimum number of treatments needed for a response?
- (viii) Are multiple treatments more effective than single treatments?
- (ix) Does the simultaneous use of drugs and ECT enhance the outcome? What are the risks?

(c) Clinical Efficacy in Mania

- (i) How do lithium, ECT, and phenothiazines compare?

(d) Clinical Efficacy in Conditions other than Schizophrenia and Affective Disorders

The role of ECT in organic brain syndromes, hypochondriasis, intractable pain, and severe neurotic conditions is very poorly defined.

(e) Adverse Effects of ECT

- (i) What is the incidence of spontaneous seizures after ECT and are barbiturates prophylactic?
- (ii) What is the present incidence of death with ECT and what is the cause of death?
- (iii)
 - a. How long after ECT do memory complaints persist?
 - b. Is there any permanent loss of memories acquired during the period of one month to three years prior to ECT?
 - c. Are persisting memory complaints related to ECT or to other factors?
 - d. How important to the patient is memory loss?
 - e. How do patients view the ECT experience six months or more after treatment?
- (iv) Is multiple-monitored-ECT less damaging to memory than single ECT?
- (v) What are the comparative effects on memory of different kinds of current parameters?
- (vi) What is the effect of the cerebral seizure and, in general, how can the therapeutic effect of ECT be dissociated from its adverse effects?

(f) Theoretical Questions

The challenge is to find more specific ways of evoking the central process by which the therapeutic effect of ECT is accomplished.

- (i) Are subcortical structures primarily or exclusively involved in the therapeutic effect?
- (ii) What is the role of acetylcholine in the ECT process?
- (iii) Would stimulation of the brain stem directly produce behavioral improvement in depressed patients?
- (iv) Do personality variables affect the outcome of ECT?
- (v) Are there differences in response between schizophrenic and depressed patients (measured in number and frequency of seizures for a behavioral change) which may be related to CSF chemistry, cerebral electrophysiology, or to other factors? Continued efforts are needed to formulate an integrated biochemical and electrophysiologic hypothesis for the action of ECT in schizophrenia.

(g) Advisability of a Committee on ECT

Because of the developing nature of our understanding of ECT, it is important that this report allow for the integration of new knowledge. We are therefore recommending the establishment of a Committee on ECT which would act as a clearinghouse for data accumulated from further studies. It would act in an advisory capacity to provide guidance on the use of ECT; and it will retain the flexibility which will allow for the modification and updating of the recommendations of this report.

SCHEDULE "M"

NATIONAL INSTITUTES OF HEALTH CONSENSUS DEVELOPMENT CONFERENCE STATEMENT ON ELECTROCONVULSIVE THERAPY

The National Institutes of Health in the United States (in conjunction with the National Institute of Mental Health) convened a Consensus Development Conference on ECT in June 1985. Experts in the field presented their findings to an audience of health professionals, former patients, and other interested persons from a wide range of disciplines. A panel agreed on answers to a number of questions, including:

5. WHAT ARE THE DIRECTIONS FOR FUTURE RESEARCH?

ECT has been underinvestigated in the past. Among the most important immediate research tasks are:

- . Initiation of a national survey to assemble the basic facts about the manner and extent of ECT use, as well as studies of patient attitudes and responses to ECT. Better understanding of negative, positive, and indifferent responses should result in improved treatment practices.
- . Identification of the biological mechanisms underlying the therapeutic effects of ECT and the memory deficits resulting from the treatment.
- . Better delineation of the long-term effects of ECT on the course of affective illnesses and cognitive functions, including clarification of the duration of ECT's therapeutic effectiveness.
- . Precise determination of the mode of electrode placement (unilateral versus bilateral) and the stimulus parameters (form and intensity) that maximize efficacy and minimize cognitive impairment.
- . Identification of patient subgroups or types for whom ECT is particularly beneficial or toxic.